65A

KING'S College LONDON

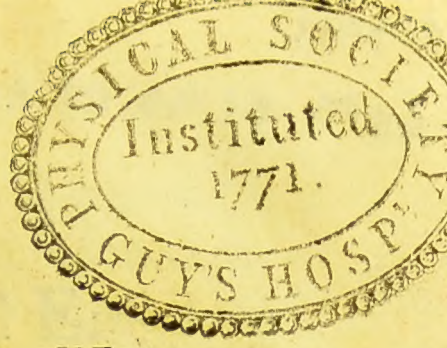
Ring Library
A treatise on the cow-pox...
1801-1803
GHPS

200912945 4
KING'S COLLEGE LONDON

Digitized by the Internet Archive
in 2015

https://archive.org/details/b21299006_0002

XXXV-C



A

TREATISE

ON THE

COW-POX;

CONTAINING THE HISTORY

OF

VACCINE INOCULATION,

AND

AN ACCOUNT OF THE VARIOUS PUBLICATIONS
WHICH HAVE APPEARED ON THAT SUBJECT,
IN GREAT BRITAIN, AND OTHER PARTS
OF THE WORLD.

By JOHN RING,
MEMBER OF THE ROYAL COLLEGE OF SURGEONS IN LONDON.

——— PERPETUA SOLVENT FORMIDINE TERRAS.

PART II.

LONDON:
Printed by the Philanthropic Society, St. George's-Fields.
SOLD BY J. CARPENTER, OLD BOND-STREET;
AND
J. JOHNSON, ST. PAUL'S CHURCH-YARD.

1803.

GHPS RC183.A2 RIN

PREFACE.

A CONSIDERABLE part of the present treatise was printed, before it was determined to divide the work; the reason for which is assigned in the preface to the former part. In order to make the volumes more equal, 528 pages may be bound up in the first.

The plates were executed by the most eminent artists, under the author's inspection. They represent the whole progress of the Vaccine Vesicle, of which a description may be found in the last page. They will readily enable an attentive observer to distinguish the genuine Cow-pock from the spurious; and from every other disease.

The work concludes with two tables. The first contains the arguments in favour of Vaccine Inoculation; the second, instructions for the practice.

The practice of so mild a species of Inocu-

lation may be thought not to require much instruction. But, if we may judge from what has hitherto occurred, it is quite the reverse. I shall, therefore, embrace the opportunity of repeating a few cautions, which are already given in this publication,

The first is, not to make more than one puncture in one arm; unless the patient is in imminent danger of catching the small-pox.

The second is, not to take matter in such a way, as to injure the pustule.

The third is, not to inoculate any vaccine patient for the small-pox, till he is rendered insusceptible of that disorder by the Cow-pock.

This was first practised, where the vaccine patients were under the necessity of breathing, what they should never have been under the necessity of breathing, an atmosphere tainted with variolous contagion. Even there it proved pernicious, by exciting and propagating the small-pox.—It is now practised where no such excuse can be pleaded; unless the atmosphere is tainted by variolous matter intro-

duced for the sake of making experiments; but which ought never to have been introduced there.

Of such an unnatural conjunction of poisons we may say, in the words of the poet,

> Concordes animæ nunc, et dum nocte prementur,
> Heu, quantum inter se bellum, si lumina vitæ
> Adtigerint, quantas acies, stragemque ciebunt.

The virus generated by similar malpractice has already been attended with ill consequences; already spread consternation, in Great Britain and other parts of the world; and proved fatal in more places than one. It has disseminated a destructive pestilence far and wide under a fictitious name; and attacked unawares those who were totally unprepared for its reception. This ought to have been a warning to all men; and particularly to the parties immediately concerned in its dissemination.

Such a practice, equally repugnant to every principle of reason, justice, and humanity, is a monster which ought to be strangled in the birth. It contains, however, within itself, the seeds of its own dissolution.—By lessening

public confidence, lessening the number of patients, and lessening the demand for a lucrative commodity, it will at length work its own downfal.

If those who ask for the small-pox at one house, receive the Cow-pox, and those who ask for the Cow-pox at the other receive the small-pox, they will in time lose all patience; and exclaim with Mercutio, " A pox on both your houses."

How accurately is this rage of making idle, useless, and wanton experiments, delineated by the masterly pen of Dr. Gregory, in his Address to the Managers of the Royal Infirmary at Edinburgh! He says, " There is a kind of *disease*, or *craziness*, in this point; and there are physicians, who, from an erroneous, or a very confused notion, of what constitutes medical science, are always making experiments, yet never make any discovery; who are always proposing new remedies, yet never make any improvement.

" All I can say for the honour of my professional brethren, is this; that the most respectable of them have always reprobated

such conduct, as severely as the rest of mankind do. Our medical phrase of reproach and contempt for it, *Corio humano ludere*, to play with the human hide, abundantly testifies in what abomination it is held."

The learned Professor, who has so well described this *itch of making experiments*, has not said one word about the cure of the disease; probably because he deemed it incurable. Certain it is, that the only remedies hitherto discovered are, not sulphur nor mercury; but *hellebore* and a *straight-waistcoat*.

I lately received from Dr. Moore, who left England last year, a pamphlet published by Dr. Anderson, Physician-General at Madras; from which it appears, that Vaccination is welcomed there with the warmest enthusiasm; and that the Governors, and medical officers, of the British establishments in India, vie with each other in their zealous exertions to promote the practice.

This is very different from the reception it met with in our frigid climate! where it first occasioned *a very long and general cold fit;* then

a very short and partial hot fit; which terminated in *a critical sweat of a few guineas.*

How unlike the profuse and salutary perspiration of certain individuals, on the rumour of an invasion! and the sacrifices they offer *at the shrine of patriotism,* and *on the altar of humanity,* when their own dear persons and property are in danger!

Parliament, which gave its mite to one of the greatest benefactors of mankind, *in consequence of his humble petition,* and acknowledged the importance of the practice in the most unqualified terms, has done nothing to put that practice into execution.—But Parliament has nothing to fear from the small-pox.

There is no room to doubt, that Mr. Hobson was careful in the selection of matter for his own son, or that the matter was good; unless we suppose the disorder was scarce, at the time when he wished to inoculate him, and that he had only Hobson's choice.

The next article in the Medical Journal, is a communication from the Rev. Mr. Gale, of East Woodhay, Hants. This is a most important acquisition to the vaccine cause; and the benevolence of its author will perpetuate his fame.

He observes, that amongst the many discoveries that have been made, for the advantage of the public, none ever claimed greater attention and gratitude, than that of the Cow-pox.

Mr. Gale first inoculated his servants; one of whom expressing a wish to know by experiment, whether it was an effectual preventive of the small-pox, Mr. Gale permitted him to expose himself to its contagion; by lying with, and inhaling the breath of a boy who was blind, and supposed to be in the agonies of death, with this cruel distemper. From this enterprise he experienced no ill effect whatever.

Shortly after this, the mother of the boy sickened with the small-pox; and soon became a deplorable object. Her husband requested Mr. Gale to inoculate him with the Cow-pox, which he did; and the

man escaped infection, although he attended his wife and son.

This truly respectable divine also extended his acts of humanity to a neighbouring town, where a general inoculation for the small-pox was going forward at the same time; yet not one of his patients felt the effects of that disorder, though in a state of constant communication with their infected neighbours.

The reverend author affirms, that greater opportunities, or more instances, to manifest the certain and blessed effects of the Cow-pox, never occurred, than in his parish and neighbourhood; for when he made his first experiments, the small-pox had entered the village in a dreadful form, ravaging and making devastation in every quarter; but every one who had received the vaccine inoculation escaped unhurt. Whilst a husband has died by the former, a wife has been saved by the latter; and amongst the many hundreds that have been inoculated in the neighbourhood, with the genuine matter which Mr. Gale introduced, not one instance occurred, in which it failed of its salutary and beneficent effects.

The reverend philanthropist expresses a hope, to hear soon, that the ingenious and indefatigable author of this discovery has received some token of his country's gratitude, for his meritorious labours;

which, as he justly observes, could not have been carried to their present state of perfection, without infinite pains, and great expense.

He observes, that the first difficulty in this arduous undertaking, was to withstand medical cabals;—the second, to render it superior to the power of envy and detraction, to bury its wonderful and glorious effects in oblivion.

He concludes with expressing a wish, that not only England, but all Europe, which now receives the benefits of this signal improvement of the healing art, may unite in expressing, by every possible means, their gratitude to the author of a discovery, which is about to banish one of the most bitter maladies from the face of the whole earth.

While several divines in this country have set laudable examples on this occasion, many of those in foreign parts have not been remiss. Dr. Jenner lately received a letter from De Carro, of Vienna, stating, that a clergyman of a neighbouring village had preached a sermon, recommending the practice to his parishioners; and it has already been recorded, that the clergy of Geneva think the distribution of the same advice to fathers and mothers, at the baptismal font, no dishonour to their sacred functions—Religion seems to say,—"Go thou, and do likewise."

The next article in the Journal is a communication from Mr. Fermor, of Tusmore, who by his early patronage, and zealous promotion of this important discovery, has laid the public under an obligation, which they can never repay.

This communication consists of a letter which Mr. Fermor received from Mr. William Sharp, concerning the origin of the Cow-pox. In answer to the enquiry of Mr. Fermor, Mr. Sharp states, that he is informed by a letter from Durham, the disease is not known there among the cattle. Mr. Sharp adds, that from circumstances which have fallen in his way, he believes, that the disorder arises from infection brought to the cows by hands employed about the diseased heels of horses; and in consequence, that it could not be known there, as the cows are universally milked by women, who have nothing to do in the stable.

Mr. Sharp concludes, with wishing all possible success to the inoculation of the Cow-pox, which Mr. Fermor has had so meritorious a share in promoting.

It has already been observed, in this treatise, that some people consider the disease in the horse's heel, which occasions the Cow-pox, as distinct from the grease. In order to ascertain whether this opinion was general, I wrote to Mr. Tanner, the veterinary surgeon, of Rockampton, who succeeded in exciting

the disease in the cow, with matter from the heel of the horse.

I also wrote to Mr. Rankin, surgeon, of East Bourn, to whom I am indebted for former communications on the same subject. Mr. Tanner replied, that he knew of no such distinction: he considers recent matter of grease capable of producing the Cow-pox.

Mr. Rankin informs me, that he has made all the enquiries in his power concerning this question; but that he has not arrived at any satisfactory conclusion.—The farmer whom he formerly mentioned, describes the disorder which he was treating when he had his complaint, as a tetter, or broadish spot, on the heels of the horse; with an oozing of a thin fluid from the skin, interspersed with small red pimples. From his account, it seems to have been a kind of erysipelatous inflammation.

This farmer had also seen cracks in the heel, discharging a serous fluid; but knew not any essential difference, either in their nature or treatment, between this disease and the former. Mr. Rankin also made enquiry of a farrier in the country, an intelligent man; who returned the same answer.

The next article in the Journal on this subject, is a letter from Mr. Simmons, of Manchester. After observing, how large a portion of that work the dis-

cussions on the Cow-pox still occupy, he says, "Perhaps no subject ever met with so ample an examination within so short a time: and indeed its importance to the welfare of mankind is commensurate to the pains bestowed upon it. The real merits of the discovery, however, seem to lie within a narrow compass, and to rest chiefly on two points; first, whether it be a security against the small-pox? and, secondly, whether it be a milder disease?

"*If the testimony of medical men in its favour, more general than was ever before published, on any one professional subject, can be supposed to determine the former, it must be admitted to be proved beyond all controversy;* and, *with regard to the latter, the result of unambiguous experience is alike convincing. These two points, then, being as satisfactorily proved as any others in medicine, it is unfair to charge the discovery itself with mistakes, which have occurred in conducting the inoculation.*"

This testimony in favour of the new practice and its advocates, which is equally disinterested and honourable, will establish it, if possible, on a more solid basis.

Mr. Simmons observes, that "an eruption of pustules was, for some time, a pretty constant attendant on this inoculation; latterly, however, seldom any have appeared on distant parts of the body, and not more in number than three or four; the inflammation

on the arm, together with a pustular eruption on that part, and a slight febrile attack, have constituted all the signs of disease. The true character of the Cow-pox had undoubtedly been changed, by an intermixture of the variolous and vaccine virus."

Mr. Simmons is inclined to think, that the vaccine virus loses its efficacy by keeping; the active particles either flying off, or undergoing some change. It is, however, certain, from evidence before adduced, that the matter, being difficult of solution, is not easily introduced: but it retains its virtue at least three months.

The value of this improvement in practice is not over-rated by Mr. Simmonds, when he states its advantages in the following words.

" Besides the two cardinal points of security and mildness, the Cow-pox possesses other properties of a very useful though subordinate nature; it is not contagious, it neither stirs up scrofula, nor any other disposition to disease that may lie dormant in the system; nor with itself is any other introduced; and it may be communicated at all ages, and under all circumstances in which a rational practitioner would think of communicating it. By the general introduction of this practice, the comfortable hope of exterminating the small-pox may be reasonably entertained; and thus millions of lives yet unborn be preserved to their friends and society.

"We learn by the accounts from the Mediterranean, that the Cow-pox preserves its characteristic mildness even in a more southern latitude; where, when it appears, the small-pox is dreadfully destructive. This is particularly the case upon the coast of Africa, and on board our slave-ships; to obviate which in future, I would recommend the introduction of the Cow-pox, and that every slave should be inoculated for it, as soon as taken on board. By this means their lives would be preserved, and their value enhanced by the security, when arrived at the place of their destination. The most beneficial consequences might be expected also from introducing it among the slaves in the West-Indies, as the small-pox is likewise very destructive to them in that climate.

"I have put together these few observations, in order to add my testimony in detail, in favour of the new practice, to the mass of evidence already before the public; and to pay my tribute of respect thus publicly to Dr. Jenner for the original suggestion; and to Dr. Pearson and others, for the zeal and industry with which they have promoted the practice of this valuable discovery."

The same Journal contains a letter from Dr. Woodforde; giving an account of a person who had the small-pox, after having the supposed Cow-pox. That this is no uncommon occurrence, the writings of almost all authors on the subject of the Cow-pox furnish abundant proof. Since, however, not one

single argument has ever been advanced, to shew that these cases were perfect cases of the true Cow-pox, and not the offspring either of the spurious Cow-pox, or of mere putrid matter, perhaps it would be more prudent not to disturb the minds of the weak and credulous with vain alarms; and thus prevent them from adopting a practice, which promises such incalculable benefits to the whole human race. To this letter the following answer appeared, in the Medical Journal for March.

To the Editors of the Medical and Physical Journal.

" GENTLEMEN,

YOUR impartiality, in admitting into your very interesting Journal, whatever tends to prove or disprove the utility of vaccine innoculation, deserves universal applause.

" In your last number appeared a communication from Dr. Woodforde, not of the most favourable kind to this question. But whatever effect it may produce, I am too well acquainted with the author, and with the rectitude of his intentions, to doubt that his motives in publishing the case were honourable.

" In this instance, a person who was supposed to have had the Cow-pox twenty-eight years ago, lately had the small-pox; which Dr. Woodforde observes, seems to militate against the permanent preventive influence of the Cow-pox.

" He says, the above history may be considered as an addition to, and illustration of, the two cases communicated by Dr. John Sims in your Journal. It is therefore but justice to the new practice to remark, that Dr. Sims has, since that time, candidly acknowledged, in the same Journal, a conviction of his error; confessing, he believed the matter used in vaccine inoculation, a real preventive of the small-pox. He has also signed the testimonial, which declares that in the opinion of the physicians and surgeons whose names are under-signed, those who have had the Cow-pox are perfectly secure from the future infection of the small-pox.

" The case of Mr. Jacobs, published by Dr. J. Sims, it is now well understood, bears no resemblance to the genuine Cow-pox. It is the spurious disease; against which Dr. Jenner cautions every person to be on his guard, lest it should create an idea of security, which might prove delusive. But admitting, for the sake of argument, that the disease which is related by Dr. Woodforde sprung from matter generated in a pustule, or a sore, which had originally been of the true vaccine kind; what proof have we that this matter, when it was applied to the hands of the patient, and when it produced pustules, had not undergone a change? What proof have we, that, when this matter infected the patient in question, it had not degenerated, and lost all its original properties, and specific virtue?

" Of such a species of degeneracy in the *small-pox*,

we meet with numerous instances in the works of Dr. Jenner; instances which occurred to very respectable practitioners, who are now living to substantiate the facts.

" If, then, the permanent preventive influence of the Cow-pox can bear as severe a scrutiny as that of the small-pox, which I am well persuaded it can; this is all that the ingenious author of the paper under consideration, or any other reasonable and enlightened man, will expect; and if these observations tend in any degree to dissipate the doubts which Dr. Woodforde's case may have excited, I am perfectly convinced no one will read them with more pleasure than himself.

" I hope this case will induce all medical men to inoculate with matter taken at an early period; and to refrain from the practice of taking it on the fourteenth and fifteenth day. I hope also, it will induce those persons who imagine they have had the casual Cow-pox, to consent to be inoculated for that disease, in order to preserve them from one infinitely more dreadful; and that my friend, Dr. Woodforde, will prevail on the sister of his patient, to submit once more to this powerful prophylactic. Should it only prove a security from the small-pox for eight-and-twenty years more, it is worth while to try it at this time; since it is probable, that before the expiration of half that period, the small-pox will be known in this kingdom only by name.

" It is by no means evident, that Dr. Woodford's patient had formerly escaped variolous infection, in consequence of having had the supposed vaccine disease; since the same thing often occures in those who have never milked a cow, nor been suspected of catching the disease in any other way. Dr. E. Bancroft lately informed me, that his brother was inoculated for the small-pox eleven times, and once taken to a patient labouring under the disease, and inoculated in both arms with a large quantity of recent matter, but to no purpose: yet, he afterwards caught the small-pox in the natural way.

" Leaving every one to form his own opinion concerning permanent preventives, I beg leave to conclude with expressing my opinion, that if medical men perform their duty, and sincerely unite in their endeavours to exterminate the disease, we shall not long have occasion for a permanent preventive, or even for any preventive at all; provided care is taken to enforce a proper quarantine, when any vessel arrives from foreign parts, where that worst of plagues, the small-pox, may happen to prevail.

" I am, &c.

" *New Street, Hanover Square, Feb.* 12, 1801. " JOHN RING."

The next article, relative to this subject, in the Journal for February, is the production of Mr. Hill, of Chester. This gentleman recommends, that you should take matter on cotton, put it into a bottle,

and carry it about in a warm pocket, till it is wanted.

Mr. Hill does not direct the matter to be dried first; we may conclude he puts it into a bottle while moist. The power of heat and moisture, in accelerating putrefaction, are well known. Any one who wishes to learn, what dire effects have been occasioned, by the use of the small-pox matter kept in the same way, need only consult the writings of Dr. Jenner. Should this custom once prevail, I shall not wonder at hearing, of the Clapham Tragedy being acted over again.

While I tremble at the consequences that may follow such a mode of keeping, I will not say preserving, vaccine matter, I most cordially agree with Mr. Hill in the necessity, not only of offering to inoculate the poor gratis, but also of circulating among them an account of the great benefits likely to accrue from this practice.

The next article on this subject, in the same respectable vehicle of medical intelligence, is a letter from Mr. Dunning of Plymouth-Dock, the ingenious author of a dissertation already mentioned. In this letter, which is addressed to Dr. Batty, Mr. Dunning says, he has no doubt but the active and unremitting exertions of the editors of the Medical Journal, to diffuse a general knowledge of the great advantages which result from the Jennerian inocu-

lation, will ensure insertion in their next number, to the inclosed additional testimonial in favour of that practice, signed by nearly all the physicians and surgeons in those large towns.

He informs Dr. Batty, that Dr. Trotter, and the navy surgeons, intend to present a gold medal to Dr. Jenner. Such a token of respect reflects equal honour on Dr. Jenner, and on those who have shewn a due sense of his high desert.

The same ardent zeal for the propagation and improvement of science, which induced the learned editors of the Medical Journal to comply so readily with Mr. Dunning's request, will, I trust, also induce them to forgive the freedom I take, in copying the attestation of the physicians and surgeons at Plymouth, in favour of the new practice.

"For the MEDICAL and PHYSICAL JOURNAL.

"The introduction of the vaccine inoculation in the populous towns of Plymouth and Plymouth-dock, at a very early period afrer the commencement of the practice in this country, and the continuance of it on an extensive scale to the present time, have afforded sufficient opportunities to a numerous body of practitioners to confirm by their own observations, and by the testimony of their immediate friends, the ample and respectable evidence which has been adduced in favour of this eminently useful

discovery. The general success of the new Inoculation has not, however, prevented the circulation of reports of unfavourable accidents, and of occurrences inconsistent with its character of absolute safety in itself, and of affording permanent security against the future invasion of small-pox. As the prevalency of such reports must have a tendency to excite doubts of the safety and efficacy of the new inoculation in the minds of those who have not the opportunity of tracing them to their origin, and who are not acquainted with the strength and solidity of the mass of evidence on which the supporters of the new practice ground their conviction of its utility, we have thought, that it might not be unattended with advantage to the public, at least to that small part of it to which our names and characters are known, to add to the numerous attestations already given, a declaration, as well of our conviction of the efficacy and security of the practice of inoculating the Cow-pox in general, as of our full persuasion, resulting from an enquiry into the circumstances of the cases adduced, that no instance has occurred in this neighbourhood, which is entitled in any degree to call in question the reasonableness of this conviction, the reports which have arisen being evidently founded in error and misrepresentation. The effects of misrepresentation can be obviated only as they arise; but it may not be amiss to observe here more particularly, that the small-pox has lately prevailed in this neighbourhood to a considerable degree; and that, in all the instances in which this disease is said to have occurred after ino-

culation for the Cow-pox, the infection of the former was evidently received before the inoculation for the latter, or the operation had failed of producing those symptoms of constitutional affection, on which alone security depends. The sources of error will, we trust, be in future avoided, by due attention to those cautions in the practice, which have been so fully pointed out by Dr. Jenner and others.

Plymouth and Plymouth-Dock, Jan. 7, 1781.

R. B. Remmett, M.D.
William Woollcombe, M.D.
T. Trotter, M.D.
R. Sheppard, M.D.
James Gasking, M.D.
Robert Fortescue,
James Courtenay,
George Cooban,
Richard Dunning,
D. Little,
Vaughan May,
Robert Serjeant,
Andrew H. Sargeant,
Thomas Stewart,
John Smith,
D. W. Spry,
J. Lower,
John Penkivil,
J. Rivers Lancaster,
Samuel Fuge,
Thomas Thynne Folds,
Stephen Hammick,
Stephen Hammick, jun.
Nathaniel Seecombe,
Thomas Richardson,
Richard Jones,
J. Beard Samhill,
R. H. Armstrong,
W. Bragg,
Peter Rowe,
John Bone."

The next article in the same publication, is a letter from Professor De Carro to Dr. Pearson; dated, Vienna, October 22d, 1800.

Dr. De Carro informs Dr. Pearson that he can no longer defer communicating to him his further successes in the vaccine inoculation. He tells him, that

a dreadful epidemic small-pox, which prevailed last autumn, has given a new lustre to that practice, which, according to the impression it has already made at Vienna, is never likely to be laid aside.

The increase of his practice has enabled him to estimate the accuracy of the observations of the English inoculators, with regard to the inefficacy of a vaccine pustule that comes on too rapidly, and does not follow the laws of that disease. It is no wonder, that many persons in this country should have been imposed on by this semblance of the real disease; since the learned Professor himself confesses, what other illustrious foreigners had before confessed, that he himself was deceived for a while, by the same fallacious appearance.

Dr. De Carro met with two cases, in which the patients had previously received the infection of the small-pox. In each of them, the disease proved extremely mild; and he asks, as others have done, whether the Cow-pox can render the small-pox more mild? I am authorised, by the united testimony of the most experienced inoculators, to affirm, that it can.

The next contribution to this branch of medical science, in the same channel of intelligence, is a letter from Mr. Branson, surgeon, of Doncaster, to Dr. Pearson.

Mr. Branson informs Dr. Pearson, that he has never been able to produce the true vaccine pustule, in a person who had undergone the small-pox.

Among other instances which I have already mentioned, in the course of this work, where the perfect vaccine pustule was excited, in those who had undergone the small-pox, one occurred in my nephew, Mr. J. Ring. A few days ago I had an opportunity of enquiring further particulars of him; he informs me, that the pustule and areola were as perfect as possible; and that several persons were inoculated from him, with the happiest success.

A similar instance took place in a young lady, five years old, daughter of Dr. Garnett, the celebrated Professor of Chemistry, in the Royal Institution.

Mr. Branson relates an instance of previous infection, in which a child had the confluent small-pox. In this case the patient sickened on the sixth day after vaccine inoculation; too early for the Cow-pox to exert its antivariolous energy with much effect.

He concludes with informing Dr. Pearson, that, since writing his last, he had inoculated upwards of 500 with the Cow-pox, without perceiving one unpleasant symptom.

The last article on this topic, in the Journal for

February, is a letter from Mr. Maddock, of Nottingham; who, meeting with a case, where the incision began to inflame and become very hard, applied various remedies to the arm; among others, warm fomentations. Every surgeon will be surprised to hear, that the unfortunate sufferer languished till the twenty-sixth day. No one, who reads this account, and also reads, that on the twelfth day the nurse who suckled this child, was taken ill of an inflammatory rheumatism, and continued so during the time it lived,—no one who reflects on this twofold cause of danger, the stimulating application, and the stimulating food, can wonder at any thing, but that the infant lived so long. For my own part, I can never allow, that it died of the Cow-pox.

About the same period was published a treatise, entitled Practical Observations on the Inoculation of the Cow-pox, &c. By John Addington, surgeon.

To these observations the ingenious author, who resides at West-Bromwich, has prefixed an advertisement, signifying, that since the design and plan of this essay were entered upon, a publication has appeared, by Mr. C. R. Aikin; which, in a certain degree, must be allowed to supersede its purpose. The author, nevertheless, persevered in his intention, of contributing his share to the common stock of knowledge, which has been amassed on this subject; justly remarking, that when different persons undertake to promote an enquiry which is allowed to be univer-

sally interesting, by such means as they severally judge most proper, they rather co-operate than interfere with the labours of each other.

After an introduction, on the importance of this discovery, and on the weight of the evidence already adduced, within the short period of little more than two years, Mr. Addington pronounces an encomium on Dr. Jenner; to whom, he observes, the merit, and the honour, of having marked with philosophic attention, and drawn forth to public observation, a number of interesting facts, not altogether unknown, but almost entirely disregarded, exclusively belong.

This, of itself, is no small praise; but when a man of Mr. Addington's talents and discernment overlooks the circumstance, it is necessary to mention once more, that the merit of discovering, by a series of accurate and well-conducted experiments, the means of disseminating and perpetuating this practice, till that cruel disease, the small-pox, shall be utterly exterminated, also belongs exclusively to Dr. Jenner. This is what constitutes more than half our triumph;—this is what constitutes more than half his fame.

The ingenious author acknowledges, that, since the date of Dr. Jenner's first publication on this subject, in 1798, a considerable number of books, and a still greater number of communications, in the monthly periodical works, have appeared; replete

with the most decisive and satisfactory testimonies, to the principal facts which were at first made known.

" The Cow-pox Inoculation," says Mr. Addington, " has been adopted by medical practitioners and others, in various parts of the kingdom; and of all who have engaged in the practice to any extent, the evidence is abundantly in favour of the advantages attending it; as a perfectly safe, mild, and efficacious preventive, of that most fatal and afflicting malady, the small-pox.

" However desirable therefore it may be, for the purpose of comparing the various accounts, and by them ascertaining the whole history and character of the disease, that this evidence should be collected from every quarter in which the inoculation has been carried on with due attention to its mode, progress, and effects; enough, it may be presumed, has already been adduced to recommend it to general adoption, at least by way of experiment. But this evidence is hitherto principally before the professional part of the public; and notwithstanding the uncommon interest which it has excited in certain circles, and the vast importance of the investigation to mankind at large, it is surprising to observe how little enquiry has been made, and how small the information possessed, by the bulk of the community. Yet, till it shall have been thus generally received, the beneficial operation of the discovery will be confined within narrow limits; and its grand advantages in a public view, as a means

of extirpating its formidable rival, will continue to exist only in the sphere of philanthropic contemplation."

Two objects are proposed by the author of the work now under consideration; one the diffusion of that knowledge which is already obtained, on the subject of the vaccine disease, the other that of adding to the testimonies already before the public, the result of his own experience. "In both, he conceives he is only discharging a duty, which is more or less incumbent on every one, who has engaged in an enquiry, so intimately connected with the benefit and happiness of society."

In regard to the origin of the distemper, the author of this essay is not inclined to assent to the supposition, that it is derived from the matter of grease; and imagines, but erroneously, that this opinion is likely to be abandoned.

Mr. Addington is of opinion, that "the inoculated Cow-pox is a disease, uniformly mild in its progress; and favourable in its issue."

He informs us, that a late report, presented to the Public Dispensary, at Birmingham, by its physician, Dr. Bree, estimates the number of persons who have gone through this inoculation, at no less than 50,000: yet Mr. Addington had not known of any one well-attested instance recorded, where the disease was at-

tended with a fatal termination, or even a dangerous indisposition. Happy should I be, could I say the same. I have lately read and heard of instances, where disagreeable consequences have arisen, in this practice; but have no doubt that they arose from some misconduct or neglect.

Mr. Addington is also of opinion, that "the inoculated Cow-pox is a perfect preventive of the small-pox."

He observes, that in addition to the respectable names of Dr. Jenner, who first introduced the practice, and Drs. Pearson and Woodville, who have also taken a principal share in the investigation of this subject, a number of others may be adduced; and recites those affixed to the Testimonial in favour of the practice.

It would be easy, continues our author, to multiply names of the first professional respectability in the metropolis, which have been given in support of the opinions in question; the confidence, however, of medical men and others, on this subject, is best shewn by the extent to which the practice has been carried, both in private families and public institutions.

Mr. Addington takes notice, that the recommendation of this valuable invention is not confined to medical men; nor have they alone engaged in the

practice. On this occasion I beg leave to mention, that, exclusive of the practitioners in this line, not of the medical profession, already recorded in this work, many others have lately come to my knowledge. Several ladies and gentlemen of fortune in Hampshire have embarked in the cause; and inoculated a considerable number.

Among others Mr. Bramston, of Dean, near Basingstoke, has acted a distinguished part. He very politely favoured me with a view of his Tabular Statement; the regularity of which would do honour to any medical man. Mr. Bramston met with rather more indisposition than he expected; nevertheless all his patients perfectly recovered.

Whether there was in reality a greater degree of constitutional illness in Mr. Bramston's practice, than in that of others in general, who have cultivated this inoculation; I cannot pretend to determine: one thing is certain; that a greater proportion of his patients complained of head-ach and pain in the axilla, than I have been accustomed to meet with.

Dr. Jenner lately saw, in a large party of persons of fashion, a lady of Portman-square, who, with another lady, has inoculated 1300 in the North of England. The rural swain, when he receives the blessing of Jenner's discovery from such a fair hand, must conclude, that the Goddess of Health has adopted the practice.

Mr. Addington has also given a list of very respectable persons, in the various provincial parts of England; who are actually engaged in the inoculation of the vaccine disease; and fully impressed with the truth and importance of the foregoing facts.

He animadverts in a becoming manner, on the gross misconduct of those persons, who rashly venture on this practice, without first endeavouring to attain a competent knowledge of the subject. "It has happened," says he, "rather perversely, in the business of inoculation, as on many other occasions; that uncommon facility in the management of the process, has become the source of numerous errors. Many persons, for want of attending to the principle, and mistaking the obvious ease and simplicity, which is the very perfection of the proper mode, for an indifference to all modes, and an indiscriminate adoption of them; have been led into a confused kind of practice, the ill success of which has essentially lowered its real standard of merit and utility, in the public estimation."

One of the most exceptionable passages in Mr. Addington's book, is that in which he gives directions for the preservation of matter.——He says, "Where the matter cannot be made use of immediately, it may be received on the point of a lancet, which should be dried gently by the fire, and charged afresh, two or three times successively; and then

carefully wrapped up, so as to exclude the air as much as possible."

With regard to this mode of receiving the matter, it is well known, that it rapidly corrodes the steel; and that inoculation, when performed with a lancet which has been charged only for a moderate length of time, generally fails. I have not lately suffered any lancet, with which I was going to inoculate, to remain armed with matter a single hour.

With regard to the mode of drying the matter, it is still more exceptionable. Dr. Jenner observed, that matter which had been dried by the fire had a greater tendency to produce ulceration, than to excite the vaccine pustule; and we have reason to suppose, that few people will be more careful in drying the matter, than Dr. Jenner.

Dr. Thornton dried matter before the fire, and found it inert; he dried it in the sun, and found it active. There can be no doubt of the difference consisting entirely in the degree of heat. I would seriously advise, that the matter should be suffered to dry in the shade; and as slowly as possible. In those unfortunate cases of small-pox inoculation, which occurred in the practice of Mr. Trye, as related by Dr. Jenner, the matter was taken no later than I have known it taken in a great number of instances, without occasioning the least ill effect; but it was slowly *dried by the fire*.

I shall embrace this opportunity, to mention an improved method of keeping and conveying the vaccine matter, which I now practice. The matter being received on two square pieces of glass, in the common way; these glasses are to be wrapped up in gold-beater's skin. The skin, being moistened, instantly adheres to the glass; and tenaciously retains it. If the glasses are well wrapped up, with two or more slips, crossing each other, the air will be as perfectly excluded, as if the glasses were hermetically sealed.

Mr. Addington met with a few pustular cases. This is no more than fell to the lot of almost every other early practitioner in this way. One case is mentioned, which occurred in the practice of Mr. Fowke, of Wolverhampton. This gentleman, having received vaccine matter from Mr. Addington, inoculated a child with it; in whom the disease took place. On the eleventh or twelfth day, two eruptions appeared; one on the temple, and one on the thigh; which Mr. Addington and Mr. Fowke concluded were of the vaccine kind.

This, however, seems to have been an erroneous conclusion; since three children, who were inoculated from these pustules, had profuse eruptions of the small-pox; and three others, who were inoculated from the arms of these, had eruptions equally profuse.

Nor is it difficult to account for these variolous pustules, in the first instance; for we are told, that this child was all day with his sister, and slept with her every night; while she laboured under a heavy burden of the small-pox.

We cannot, therefore, but be rather surprised, that Mr. Addington should remain in a state of suspense, relative to pustular eruptions, in consequence of such evidence. Yet, notwithstanding, he still entertains a doubt on this point, he expresses a decided assurance, that however this question may be eventually decided, nothing has hitherto occurred, to deter the most cautious from engaging in the practice, provided he pays due attention to the circumstances and progress of the disease.

The number of cases, of which Mr. Addington has given a tabular statement, was 70. Of these, several had eruptions.

The first case which he relates, affords a sufficient proof, that all practitioners ought to watch attentively the progress of the pustule; and not to suppose that the disease is over, till the arm is healed.

In the eleventh and twelfth cases, the chicken-pox took place; and in some measure retarded the course of the Cow-pox.

In the thirtieth case, previous to the attack of the

fever of the small-pox, the vaccine tumour appeared in its usual form. Immediately on the attack of this disease, its activity seemed totally suspended; and instead of a proper Cow-pock vesicle, accompanied with its characteristic inflammation, it became a simple variolous pustule.

A brother and sister of Charlotte Rider, the subject of the foregoing case, were inoculated, and infected, with Cow-pock matter; and escaped the small-pox, although they were her constant companions by day and night.

Case 33. Benjamin Martin was inoculated with the Cow-pox, after the small-pox appeared on his sister; and was her constant companion. He also escaped infection.

Case 37. The small-pox appeared on the 4th day; and the inoculated part, which had before discovered its usual character, now assumed that of the variolous pustule.

The 48th, we are told, was an instance, in which maturating varioliform pustules, in a considerable number, accompanied the vaccine disease; where no source of variolous contagion could be distinctly traced. This to me seems rather inconsistent with what immediately follows: for we are told, that at the time of inoculation, and for some days afterwards, the small-pox was at a house in the neighbourhood,

near which the mother had occasion to pass daily; and that she sometimes had the child in her arms.

Other cases, we are informed, might be added; but as they afford no particular inference, it was deemed unnecessary. Of the 70 cases above cited, 28 were subsequently inoculated with variolous matter; the first fourteen of them about six, seven, and eight months after passing through the Cow-pox; the others within a few weeks afterwards. In all of them, the constitution equally and perfectly resisted its contagion, except the two instances, No. 3 and 14, where the vaccine inoculation failed, and was not repeated; and in these the small-pox took its usual course.

About the same time another publication appeared, entitled "Evidence of the Utility of Vaccine Inoculation: by Thomas Creaser, Member of the Royal College of Surgeons."

This work is dedicated to Lord Somerville, in a concise and elegant address. Mr. Creaser observes, that the zeal and ability which his Lordship has evinced, and the honourable share he has taken, in various objects of useful science and national utility, will confer reputation on every pursuit which is favoured with his patronage. He adds, that he has peculiar satisfaction, in being permitted to dedicate to his Lordship this effort, to convey popular information on the important subject of vaccine inocula-

tion; a discovery, of which his Lordship has been, from its earliest introduction, an ardent promoter; and to the distinguished author of which he has ex-extended his personal friendship.

Such is the well-merited panegyric, which Mr. Creaser pronounces, on one of the most celebrated patrons of useful arts:

"Nobilitas sola est atque unica virtus."

Mr. Creaser informs us, that this attempt to place in a popular and intelligible point of view, the principal facts and arguments in favour of vaccine inoculation, is intended for parents, and those concerned in the preservation of youth.

The ingenious author observes, that "whatever differences of opinion may subsist, concerning the propriety of promulgating medical and physiological knowledge amongst society at large, none such can arise on the present subject; as its intrinsic advantages, and grounds of preference, are cognisable by all."

He adds, "An early interest in this invaluable improvement, and the opportunities which intimate communication with the ingenious Discoverer has conferred, of repeatedly witnessing all the phenomena of the Cow-pox, have induced me to aim at the supply of this deficiency."

Mr. Creaser remarks, that extensive and impartial trials of the truth of Dr. Jenner's positions have been instituted, and prosecuted with avidity, by men of the first talents; independent of concert, or co-operation. The result is, that although the inoculation of the Cow-pox is one of the boldest and most direct innovations on preceding practice, and, as such, has had to encounter all the impediments which are usually opposed to novelty, by the operations of scepticism, prejudice and interest, yet its unparalleled advantages have been realized in their utmost extent, by a mass of irresistible evidence.

After giving an account of the Cow-pox, the author asserts, that those who have had that disease are for ever after secure from the infection of the small-pox.

To confirm this position, Mr. Creaser adduces a variety of evidence; from which the following deserves to be selected.

Extract of a letter from Mr. Dunning, surgeon, Plymouth-Dock, author of a pamphlet on the Cow-pox, to Mr. Creaser:

"More than a thousand subjects have been vaccinated in this neighbourhood, during the last year. Some hundreds of them have fallen to my share. Complete success has been invariable in every case, where the vaccine character has been unequivocally

expressed.—With very few exceptions, there has been no indisposition, or the least imaginable; and I know of no shade of accident, that can fairly be attributed to the new practice."

Mr. Gunning, surgeon of the Vaccine Institution, informs Mr. Creaser, that great numbers have lately been inoculated with the Cow-pox at the Institution and at the Small-pox Hospital; and afterwards inoculated with the small-pox.—It is scarce necessary to say, that they all escaped infection.

After laying before his readers various testimonials in favour of the practice, which are already mentioned in this work, Mr. Creaser presents us with a copy of a letter, containing a curious fact of the inoculation of the Cow-pox, twenty years since.

"*Lansdown-Place, Bath,*
Jan. 7, 1801.

"SIR,

"As I understand you are publishing a few remarks and cases on the Cow-pox, I cannot withhold that of John Bright, of this parish; a labouring man, whom I sometimes employ. About twenty years ago, being then a farmer's boy, his fellow servant, having milked a cow with a diseased teat, became affected with the Cow-pox; and in a frolic communicated the disease to him, by means of a small scratch on the hand. He has since been repeatedly inoculated, without producing any appearance of the

ordinary disease. His family have since had the ordinary small-pox around him; and he has more than once been in the way of the most malignant species of the natural small-pox, without any sort of effect.

"I am, &c.

"HENRY WHITE."

"It may now be affirmed," says Mr. Creaser, "on the most extensive induction of facts, known from time immemorial, and as the result of the most rigorous and severe examination, that the power of the Cow-pox, to render the system for ever insusceptible of the small-pox, is a proposition completely demonstrated. There is certainly not a law in the whole circle of physical sciences, which stands on a firmer basis; nor an aphorism in the medical art better founded than this."

After giving a succinct account of the introduction of vaccine inoculation by Dr. Jenner, and alluding to the ravages of the small-pox, and the ineffectual attempts hitherto made to exterminate that disease, or to disarm it of its terrors, Mr. Creaser makes an earnest appeal to every parent, and protector interested in the guardianship of youth. He recapitulates the various inconveniencies attending the small-pox, whether natural or artificial; enumerates the different advantages resulting from the substitution of the Cow-pox; and gives an accurate description of the progress of the pustule.

He says, " it cannot be too strongly inculcated, that this disease, though light and trivial in its operation, is one of peculiar nicety in its laws; and to give the inoculated Cow-pox that effect on the human animal economy, which renders it insusceptible of the small-pox, requires much knowledge of its phenomena." " It is not within the plan of this work," adds Mr. Creaser, " to enter into those details on the nature of disease, which it is the peculiar duty and province of medical men to become acquainted with; but a regard to the interests of society, and the reputation of the new practice, renders it a duty to oppose the very dangerous opinion, that its management may be committed to uninformed hands."

The author refutes the various objections urged against the practice; and observes, that the evidence in its favour has been accumulating with unexampled rapidity. In a practice so recent, and at the same time so extensive, he is not so sanguine as to doubt, that errors will be committed, and cases adverse in appearance occur. This, he justly observes, ought not to be adduced as an argument against the adoption of the practice; but as an incentive to caution.

He declares, he can scarcely deem it possible for a mind to exist so torpid, as to contemplate the vast advantages likely to result to mankind from this practice, with indifference. He maintains, that this improvement may rank with the highest, which the genius or experience of man has suggested, or which

the annals of the medical art record; and that a few exceptions to the general law of the efficacy of the vaccine inoculation, cannot prevent it from annihilating and extinguishing that bane of human existence, the small-pox.

Upon the whole, it must appear evident, that Mr. Creaser has completely accomplished the great object he had in view, that of writing a popular treatise on the Cow-pox. The Bath press, which lately poured forth a torrent of abuse on vaccine inoculation, now lavishes the warmest encomiums on the practice; and makes an ample atonement for the crime.

Since I adverted to a critique on Dr. Aubert's Report concerning the Cow-pox, the original has fallen into my hands; which affords me an opportunity of extending my comments to that work also.

The general opinion entertained by Dr. Aubert of this disease, excepting only the subject of purulent eruptions, is so nearly similar to that of other practitioners, that I deem it unnecessary to particularize it here.

With regard to these eruptions, he says, they have given room to discussions among inoculators. He says, the disputes on this point are terminated, and the doubts removed: that we acknowledge, at present, the Cow-pox can produce a pustulous eruption; we know also, that this is a very rare occurrence.

He says, numerous experiments have convinced him, that the Cow-pox and the small-pox can develope themselves at the same time, and co-exist in the same subject. We may therefore suppose, says he, that when patients under vaccine inoculation have pustules, it is because they have received the infection of the small-pox, either before or after inoculation of the Cow-pox.

This suspicion, however, he thinks, is not well founded. He asserts, that with matter taken from these pustules, he has produced, not the small-pox, but the Cow-pox. These experiments were made by Dr. Aubert in the Small-pox Hospital. He says, the same matter, when used out of the hospital, produced only the Cow-pox: this assertion is already proved to be erroneous.

Dr. Aubert allows, that these pustular cases are not near so frequent, as they were when Dr. Woodville made his first report. He tells us, these eruptions have not appeared in any considerable number, unless in the Small-pox Hospital; and in those places where the small-pox prevailed. This opinion also is erroneous. Cases attended with numerous eruptions, have occurred in my own practice, and in that of many others; produced by contaminated matter, which in general issued from the same source.

Dr. Aubert says, it is almost impossible not to admit, that these pustules are excited, developed,

by variolous contagion. But, exclaims he, how does the variolous poison exert this influence? This, he says, is difficult to explain, or comprehend.—It is, however, no more difficult to explain or comprehend this, than it is to explain or comprehend, how it infects one who has not the Cow-pox. Dr. Aubert himself affirms, that any one who is inoculated with the Cow-pox, may have the small-pox at the same time; and that, in such a case, the small-pox will follow its ordinary course.

Dr. Aubert is of opinion, that this complication of the two diseases frequently took place at the Small-pox Hospital, both from natural infection, and from inoculation when performed by design. It is, therefore, not at all difficult to account for the appearance of pustules, in the Cow-pox; either in persons inoculated in the Small-pox Hospital, or with matter obtained from that quarter.

Dr. Aubert says, he was indebted to the complaisance of Dr. Woodville, for an opportunity of being an eye-witness of all the experiments of compound inoculation, which Dr. Woodville had before made, and published an account of; those experiments having been all repeated in his presence.

To the same complaisance several poor wretches were indebted for a complication of diseases, where only one was necessary. To that complaisance one poor woman was indebted for the confluent small-

pox; and for the pleasure of propagating that disease. She was indebted to Providence for her recovery.

Had she died, it would not have been the first reproach brought on Cow-pock inoculation by experiments made at that place. A very eminent physician was deterred from trying the practice, by the ill success attending those experiments; and a gentleman in the law informed me, that a publication against the Cow-pox had appeared; which turned out to be the report of those experiments.

Dr. Aubert says, Dr. Woodville has seen the vaccine pustules confluent; but that such a case never presented itself among a considerable number of eruptive cases, which he had an opportunity of observing. This shews, that the vaccine lion had in some measure shaken off the dew-drops from his mane, when Dr. Aubert honoured the hospital with his presence.

Dr. Aubert adopts Dr. Woodville's mode of reasoning on this occasion; and says, that when pustular cases in the Cow pox are frequent, the small-pox is evidently the occasional cause by which they are developed. By the same kind of reasoning it may be said, that the pustules of the small-pox are the effect of a catarrh, or any other complaint with which a person may be troubled at the same time; and that variolous infection is only the occasional cause, by which those pustules are developed.

It is rather remarkable, that in the present age, when surgery is advanced to such a degree of perfection, Dr. Aubert should recommend the application of compresses dipped in *lukewarm* water, as a remedy for inflammation. *Warm fomentations*, it is true, have been used for the same purpose; I need not say, with what success.

Dr. Aubert says, when the Cow-pox is attended with an eruption, the matter which is contained in the pustules reproduces the Cow-pox.—This assertion is too general. If a rule is to be laid down in this case, it ought to be qualified by several exceptions. Surely Dr. Aubert does not intend to affirm, that every kind of eruption which accompanies the Cow-pox, contains vaccine matter, and is capable of producing the vaccine disease. This, although he asserts it in fact, is contrary to the tenour of his own reflections on the subject.

Upon the whole, I consider it as a duty which I owe to science, to the cause of truth, and to the world, to say, that Dr. Aubert's account of the Cow-pox is not such as I should have expected from a physician, who is said to have been delegated by the National Institute and the School of Medicine, to enquire into the nature of vaccine inoculation in this country. It is true, he was so unfortunate, as generally to see the practice under an eclipse. He has also been so unfortunate, as to forget the rule laid down by Horace;

Non fumum ex fulgore, sed ex fumo dare lucem.

Dr. Aubert says, some inoculators have not found the matter taken from secondary pustules possess the property of occasioning a general eruption, more frequently than matter taken from the arm. He says, he has seen some cases, which have induced him to adopt a contrary opinion. He acknowledges, however, that those whom he inoculated with this matter, were constantly exposed to the influence of the small-pox.

It is really surprising, Dr. Aubert should expect, that a person inoculated with matter generated in a secondary pustule, at the Small-Pox Hospital, and exposed to the infection of a variolated atmosphere, could escape. To expose a man to this double chance of catching the small-pox, is to place him between two fires.

Dr. Aubert says, when vaccine virus has been kept a long time, it either excites the Cow-pox, or produces only a local inflammation, which yields no specific matter; and the appearance of which cannot be mistaken for that of the Cow-pox. This is an erroneous assertion. Stale matter has produced a spurious pustule, which has been mistaken for the Cow-pox, at Geneva, and at Vienna; and this fallacious appearance has deceived some of the first physicians in Europe.

Dr. Aubert coincides in opinion with inoculators in general, that the Cow-pox is always a disease aris-

ing from inoculation, whether intentional or accidental. He also considers it as the same, whether communicated by the cow, or transferred from one human subject to another.

One case, related by Dr. Aubert, is worth recording; as, it is an additional instance of the efficacy of the Cow-pox. A man who had caught that disease many years before, by milking the cow, came to the Small-pox Hospital, to be inoculated for the small-pox; not knowing that the Cow-pox was a preservative from that distemper. He continued there several weeks, surrounded with patients in the small-pox and in the Cow-pox; and Dr. Aubert inoculated him with each kind of matter, but without producing the least effect.

Dr. Aubert says, he prefers the mode of inoculation by single puncture to any other, only because it excites a more regular tumour, which enables us the better to form a diagostic. Other important advantages have already been pointed out; it occasions a slight local affection, and of course less constitutional indisposition.

Dr. Aubert observes, that it is necessary to make an accurate distinction, between the small-pox, and that local affection which is sometimes occasioned by inoculating with variolous matter, those who have had either the small-pox or the Cow-pox.

Instances of such local affection have already been adduced, in the course of this work. I shall, nevertheless, record this additional proof of their existence.

Some children who had undergone the Cow-pox a year before, were exposed to the infection of the small-pox, in the Small-pox Hospital; and at the same time were inoculated with variolous matter in each arm. In one of them a pustule appeared on the inoculated part, bearing an exact resemblance to a small-pock; from which matter was taken, which produced the perfect disease.

Dr. Aubert observes, that instances of a similar kind are common; where a local pustule is excited by variolous matter, in those who have had the small-pox; whether the matter is applied by chance or design. Desoteux, in his Treatise on Inoculation, has published an account of experiments of this sort; where all whom he inoculated from one of those local pustules, had the small-pox as completely, as if they had been inoculated from one who had the general affection.

Dr. Aubert relates the case of a woman, who had been inoculated in the Small-pox Hospital; and in whom the journal of the hospital bears record, inoculation succeeded; of which some traces remain. This woman lost a child whom she nursed, by the confluent small-pox. Two or three days after, she had an eruption of nineteen pustules exactly resemb-

ling the small-pox, on her face; principally on the cheek, where the hand of the child had continually rested.

Dr. Aubert concludes his work with observing, that the memoir published by Dr. Odier, contains all the evidence, and all the instructions, necessary to confirm and to propagate Dr. Jenner's discovery; and has naturalized the practice on the continent.

Exclusive of the preceding publications on the subject of the Cow-pox, by professional men, a pamphlet has lately appeared, entitled, "Observations on the Utility of Inoculating for the Variolæ Vaccinæ, or Cow-pox: by Mr. Gardner, of Frampton-upon-Severn.

Mr. Gardner has deservedly attained a considerable degree of celebrity, by various publications; particularly by his work entitled, "Reflections on the high price of Provisions."

He dedicates the present performance to his friend Mr. Hicks; who has "ever been an able supporter, of the practice," which it is the principal object of this essay to recommend.

Blest with a mind superior to popular prejudice, he set an example to his country, by submitting his own offspring to the vaccine inoculation, at a period when that light, which now shines forth with so much lustre, just began to dawn.

Nor did his benevolent exertions end here. By pointing out the advantage of the practice, and vindicating its injured fame; he has "had no inconsiderable share in diffusing the knowledge of a discovery, —more important in its nature, and more beneficial in its effects, than any other that was ever communicated to the world."

The ingenious author of this publication remarks, that, "although in every scientific pursuit, in which the enterprizing spirit of man is engaged, we may discern merits which claim our unqualified admiration, yet the proportion of fame which permanently attaches to such pursuits, must be measured by their utility. Public advantage is the test, by which the labours of the learned and ingenious will be finally estimated. It was not so much the nautical skill displayed at the battle of the Nile, as the public safety, which depended on this contest, that so highly exalted its illustrious hero; and rendered his dignity, and his reward, the objects of universal approbation.

"The frivolous pursuits which adapt themselves to the variations of fashion and folly, however they may for a time engage attention, must quickly be abandoned: but those researches which ultimately prove beneficial to the human race, will be stamped in indelible characters, in the records of fame."

Mr. Gardner observes, that "the origin of the small-pox may be traced, according to the Arabian

authors, to the beginning of the seventh century. It first appeared in Egypt in the reign of Omar, successor to Mahomet; and it has been conjectured, according to the earliest authentic accounts, that it was transplanted hither from the East."

He says, "Whether inoculation has proved beneficial to the human race, considered collectively, is a question that has often been agitated; and still remains undetermined."

After a succinct history of the rise and progress of vaccine inoculation, Mr. Gardner adds, "It is needless to repeat the variety of communications upon this interesting subject, from every part of the kingdom. It is sufficient to observe, that the result of every experiment has been uniformly the same: the Cow-pox in all cases, proving a safe and certain preventive from the small-pox."

Mr. Gardner remarks, "that it has been asserted, the Cow-pox has only a temporary influence over the constitution. This assertion proceeds from those persons, who, in the infancy of the enquiry, displayed very strong prejudices against the new inoculation: which were forced, in some measure, to give way to the evidence that was every day rising before them."

The ingenious author justly observes, that "every deviation from established practice, every medical

theory which overturns old and deep-rooted opinions, must always encounter opposition. This opposition is natural to the human mind; and he must be a philosopher possessed of wonderful powers of self-denial, who can wholly suppress the sigh of sorrow, when he contemplates another's fame."

Mr. Gardner not being of the medical profession, his opinions, concerning the utility of inoculating for the Cow-pox, may by some persons be thought of the less consequence; but he declares, the opinions which he has formed, are the result of a no less careful than comprehensive view of the subject. They are opinions not merely theoretical. He has seen a great number of patients inoculated with Cow-pox virus; and afterwards subjected to the variolous test, which they resisted.

The author expatiates on the vast advantage, which the community at large will derive from this discovery; and asserts, that he who disarms a powerful foe, who with a deadly weapon, assaults the health and the lives of the whole human race, prefers a claim to gratitude, which reason, philosophy, and religion, must approve.

He concludes with remarking, that whether the author of this discovery will receive a public testimony of his country's grateful approbation, is uncertain; but one thing is certain, that the rising generation, many of whom owe their lives to that prac-

tice, which is the fruit of his genius, and his labour, will reflect on the name of Jenner, with feelings of the warmest affection.

Whatever gratitude the world at large may shew on this occasion, their benefactor cannot consider himself as quite unrewarded; while men of genius present him with the Civic Crown, and twine a never-fading wreath around his brow.

The Medical and Chirurgical Review for January, 1801, makes mention of another discovery lately made; namely, that inoculation with vaccine matter is a preventive of the disease commonly termed the distemper, in the canine race. It must give great concern to the friends of Dr. Jenner, to hear that Cow-pock inoculation, concerning which they have vaunted so much, is so soon *gone to the dogs*.

To be serious: the same respectable publication asserts, that "vaccine inoculation continues to be practised with all the success that has hitherto been attributed to it. In many of the most considerable provincial towns, it has been very extensively employed; and a considerable part of the army and navy, both at home and in the Mediterranean, have undergone the operation.

"Rumours, however, of variolous infection, subsequent to the vaccine, continue to be propagated: but they want that minute and circumstantial evi-

dence, which alone can produce conviction; and which has been amply produced on the other side."

The Reviewers then take notice of those unfavourable cases, which occurred a short time before, at a neighbouring village. These they attribute to poisonous matter.

In the same Review for March, cases which have been published in opposition to this practice are inserted. These have already been noticed in this work.

One case, which has been the subject of conversation, I shall here relate. It occurred in the family of a medical man, whose name I am not permitted to mention. A report was circulated, that a child died of the Cow-pox. This report, I am assured by an eminent surgeon, who saw the child, was not well founded. That gentleman saw the child, when recovered from the Cow-pox; a dry scab only remaining on the arm. She then laboured under a peripneumony; which proved fatal.

Among the various periodical publications, which have given a history of the progress of vaccine inoculation, one, by Professor Hufeland of Jena, states, that Dr. Lentin writes the following account, dated 27th July, from Hanover.

"As the inoculation of the small-pox extended it-

self from Honover through Germany, so the inoculation of the Cow-pox was at first instituted at Hanover. It has now been known more than a year; and although we have as yet no decisive result; what we have been able to learn, seems to promise its general adoption.

Experiments have been made at Hanover, by many medical men; yet no one who had undergone vaccine inoculation, how much soever exposed, was found capable of catching the small-pox.

An inhabitant of Hanover, whose child was seized with the small-pox, had another child inoculated with the Cow-pox. It went through the disease in a regular manner; but at the end of a fortnight, a variolous eruption appeared, *which proved extremely benign.*

Dr. Heim, of Berlin, inoculated several persons with the Cow-pox; and one of them with the small-pox matter, but to no purpose.

In the Medical Journal for March, 1801, is a letter from Dr. Whyte, late a surgeon in the navy, dated, Pera of Constantinople, Dec. 7, 1800, in which he says, "It must prove satisfactory to the friends of humanity, to hear of the extension of the vaccine inoculation to this distant quarter. But I am sorry to add, that it is not likely soon to be generally adopted, and that fears are entertained, of its falling into disuse, the moment I depart.

He informs us, that although at the head of those whom he has inoculated, stands the son and heir of his Majesty's Ambassador Extraordinary, Lord Elgin; although he and four others, on whom the inoculation has succeeded, have gone through the different stages of the disease in the mildest manner possible; and although the natural small-pox is at present committing the most terrible ravages in a neighbouring village, still no impression can be made on the stupid and torpid race of men, who constitute the motley population of this great capital. Abandoned to indolence, their whole life is little better than a vegetable existence; and they are neither to be roused from their lethargy by the force of reason, nor by the fear of danger.

Dr. Whyte also informs us, that to make amends for the uncourtly reception which the vaccine has received in that place, he has lately transmitted, by an over-land conveyance, a piece of rag, impregnated with matter, to one of his friends at Bombay; and another to Mr. Werry, the English Consul at Smyrna, who proposes immediately to inoculate one of his own children.

The matter which Dr. Whyte used, was received from Dr. De Carro, of Vienna.

In the same number of the Journal is a letter from Dr. Marshall, dated from on board the Foudroyant, Nov. 27, 1800. This gives an account of

his inoculating a child who had had the Cow-pox, with variolous matter, in the presence of the medical gentlemen of Mahon, the jurates, and a number of the other inhabitants. The child resisted infection, and convinced those who had been the most incredulous, of the efficacy of the Cow-pox. Thus, says he, the blessing of the vaccine inoculation is every day spreading more and more.

In the same Journal is a review of a pamphlet, entitled, "An Account of the Nature and Effects of the Cow-pock &c. by Dr. Barry of Cork."

Not having the original work, I take the liberty of transcribing the aritique of the learned editors on this work.

"This short pamphlet contains a number of facts and cases, which we wish to recommend to the perusal of our readers. The following opinion, we think, should be generally understood. The frequent occurrence of the *Scrophula* or Evil, after the small-pox, has given rise to a well-known popular prejudice, that the poison of the scrophula has been communicated with that of the small-pox, from one family to another. Whatever reason there may be to doubt this opinion, from a consideration of the laws of the animal economy, yet, its being so very general, proves the frequent appearance of the scrophula, after the small-pox, where no pre-disposition to it had before existed. From an observation of

this fact, and historical reference to the period when scrophula was first known in Europe, it has been suspected that this disease was primarily occasioned, and is still continued by the small-pox.

" It is not the least valuable characterictic of the Cow-pock, that no scrophulous swellings of the glands of the neck, or other scrophulous affection, has been known to follow it in any of the numerous persons hitherto inoculated. With what additional pleasure we shall contemplate this discovery, if, by the more general extension of the vaccine inoculation, we shall with the small-pox, exterminate another loathsome distemper, in its ultimate effects no less fatal, and from its supposed hereditary nature, infinitely more dreadful than the small-pox."

In the same number of the Journal, we meet with the following information.

" The new inoculation having been ordered throughout his Majesty's navy, by the authority of the Right Hon. the Lords Commissioners of Admiralty, the medical officers, with becoming public spirit, to commemorate this event, have voted a GOLD MEDAL, with appropriate devices, to be presented in their name to Dr. Jenner, as a token of the value with which they regard his professional labours, and the good which mankind is likely to derive from the vaccine practice.

"*Certus enim promisit Apollo.* A Medal of exquisite workmanship is now executing by an eminent artist; the particulars of which, with a list of the naval medical gentlemen, we hope to be able to present to our readers in some future number of our Journal."

By the Moniteur of Primedi, 11 Ventose, an ix. de la Republique, we received intelligence of the rapid progress which the new practice is making on the Continent.

In Paris, a letter has been addressed to the magistrates by the Medical Committee for vaccine inoculation; in which they request the magistrates to concur with the Prefect of the Department of the Seine, in the establishment and propagation of this great improvement of the healing art, under his auspices.

As a proof of the utility of this practice, they state, that above a thousand had been inoculated with the Cow-pox in Paris; yet not the least ill consequence had occurred; nor had one of the patients been confined to his bed a single day.

They have ascertained in the most satisfactory manner, that this affection is not contagious in an aerial form.

Those who had undergone the Cow pox, have

been exposed to the infection of the small-pox, by constantly residing with those who laboured under that disease; lying in the same bed, and eating and drinking from the same vessels; yet not one was infected. Seventy-two have been inoculated with variolous matter; but in vain.

The committee therefore declare, that they have verified and ascertained, by multiplied experience, the observations of the English physicians; and are convinced of the truth of their three principal assertions; namely, that the Cow-pox is a very light disease,—that it is not contagious but in a palpable form,—and, that it is a preservative from the small-pox.

The committee announce, that they are preparing a report, in which they will render an account of their labours; and thus fix the public opinion, concerning the most brilliant, and the most important discovery of the 18th century;—a discovery, to which France, Europe, and the whole world, will be indebted for the annihilation of that most destructive scourge, by which they have been ravaged and desolated, for so many ages past.

They propose for an establishment to be formed, in the centre of Paris; where the people may be inoculated, and inoculators instructed in the best method of conducting vaccine inoculation; in order to overcome the inattention, prejudice, malevolence,

and ignorance, which always oppose useful establishments; especially when it is proposed to render those establishments popular. The Prefect of the Department has promised his assistance in this undertaking.

They propose a conference with the magistrates, and the medical practitioners of Paris; in order to concert with them the most effectual means of promoting this beneficial design and extending its advantages to the community at large.

To shew the necessity of such an institution, for the sake of instructing those who are to practise the vaccine inoculation, they confess, that at the commencement of their own practice, they confounded the spurious with the genuine pustule; and had no accurate knowledge of the disease. This proves how egregiously those persons are mistaken, who assert, that the spurious pustules cannot be mistaken for the true.

The committee concludes with observing, that in this art, experiments are attended with difficulty, and with danger. Hence the necessity of caution, in the choice of persons who are to pursue the practice; which is not so simple as some people are simple enough to believe.

While our neighbours on the Continent are thus exerting their utmost efforts, in order to diffuse the

benefits of this happy discovery; we may be permittted to indulge a hope, that their humane and patriotic endeavours will stimulate others to follow their example; and excite universal emulation.

In England, vaccine inoculation has not hitherto met with all the public patronage and support, which its acknowledged merit seems to claim. Nevertheless, the zealous and indefatigable exertions of many private individuals in some measure supply that defect.

Some instances of this sort I have already mentioned. Others, which have come to my knowledge, deserve to be recorded. The Rev. Mr. Fielding, Rector of Haslemere, in Surry, and a magistrate for that county, has not thought it any disparagement of his rank, or of his sacred function, to bestow the blessings of this beneficial practice on his poor neighbours; and to inoculate them with his own hands. I had the pleasure of supplying Mr. Fielding with vaccine matter, at the request of his relation, Dr. Fryer; from whom I learn, that his practice was attended with uniform success.

The same success has attended the benevolent exertions of the Rev. Mr. Joseph Berrington; whose talents, virtues, and liberality of sentiment, render him an honour to the religion he professes, and an ornament to human nature.

Mr. Bishop, of George-street, Portman-square,

applied to me for some of the vaccine fluid for Mr. Berrington; and at the same time informed me, that Mr. Berrington had inoculated three hundred, with the happiest success.

While we revere such characters, in what detestation must those persons be held, who go about, propagating falsehoods, in order to blast the reputation of this practice? Of these falsehoods the following is a specimen.

Extract of a letter, written by a surgeon, who has distinguished himself in the practice of vaccine inoculation. "March 1st. 1801, no application from the Hot-Wells has been made to me; owing, perhaps, to a fresh report which now prevails there, respecting the Cow-pox; viz. that Dr. Jenner has lately had eight patients, who after having gone through the Cow-pox, caught the small-pox; and that in consequence, he has very candidly, though with great reluctance, owned, that the Cow-pox is not a security against the small-pox."

By the same channel, however, I had the pleasure of receiving the agreeable intelligence, that Dr. Beddoes is at length become a convert to this practice; and that he has determined to make the pneumatic Institution at Clifton, subservient to the inoculation of the Cow pox.

Hence it appears, that in his past opposition to the

practice, this celebrated physician and philosopher, was influenced solely by a sense of duty; not by motives of a less liberal kind; such as are said by the late Dr. Gregory, sometimes to influence the conduct of medical men.

In his "Observations on the Duties and Offices of a Physician," he says, "The confinement of the practice of physic entirely to a class of men, who have no other method of subsistence, is unfavourable to the progress of the art; because the spirit of improvement is often checked by, and is sometimes incompatible with, the necessary attention to private interest.

"Physicians are neither better, nor worse, than the rest of mankind. They are influenced by the same general motives of action. A physician, when he sets out in life, soon perceives, that the knowledge most necessary to procure him a subsistence, is not the mere knowledge of his profession. What he finds more essential to that purpose, are the various arts of flattery and insinuation; and the art of deceiving mankind into a high opinion of his understanding, by an appearance of solemnity and importance in his whole deportment; views very different from those of genius, and of science.

"He can with difficulty find a patron to his real merit; because none are judges of it, but a few of his own profession; whose interest it is to have it

concealed. If he attempts to shew the weakness of the fashionable system, or to introduce any alteration in the practice, the whole faculty are alarmed; their vanity is piqued, in having opinions, which they thought perfectly established, brought in question, and exposed by a young man; and their interest is evidently concerned, to crush him as soon as possible.—

"By what is said above, no reflection is intended to be thrown on mankind; as if they were naturally enemies to superior merit. In the pursuit of interest, and of ambition, one man does not hate another, because he is engaged in the same race; he desires him only to keep his proper distance behind, and he will wish him extremely well.

"Neither is it meant, while we describe the characteristical spirit of a class of men, to include all the individuals of a profession. There is a conscious dignity, that generally accompanies genius, which renders those who possess it, equally superior to the suggestions of envy, and all the low arts of dissimulation.

"But, not to insist further on arguments to shew, that no considerable improvement in the art of medicine can be expected from physicians, while they are on the present footing, I shall observe as a fact, that it appears from the history of medicine, the improvements in it were seldom owing to those phy-

sicians, who valued themselves upon being regular, systematic, rational practitioners; nay, what is more extraordinary, they have often been opposed by such practitioners with great keenness and acrimony; and seldom adopted, till after a very long struggle."

This spirit of opposition, has occasioned the reports which are unfavourable to the new practice, to be received with the greater avidity. *Facilè credimus quod volumus*. A few days ago I was informed by a very respectable surgeon, a sincere well-wisher to vaccine inoculation, and every other improvement in medical science, of a report which originated with persons of a very different character. It was this; that a person of Clapton, whom Mr. Cline inoculated for the Cow-pox, lately had the small-pox. I therefore enquired of Mr. Cline, whether this report was true, and received the following answer.

A child of Mr. Austin, at Clapton, had been inoculated for the Cow-pox; but infection did not take place. It afterwards had the small-pox. Mr. Cline did not inoculate, but merely saw the child. This was sufficient to excite a false report against the new practice; and such is the industry of its opponents, that you no sooner contradict one falsehood, than they invent another.

> Destroy the fib, and break the web,—and then
> The creature's at his dirty work again.

Nor are these rumours, in all cases, to be treated

with contempt. Many of them are supported by the most plausible evidence; and may deceive any one, who is not deeply versed in the subject. Of this kind are the following.

Mr. Upton, a grocer, of Kent-street, Southwark, wished to have two children inoculated for the Cow-pox. His wife refused her consent, on account of information she had received, that two persons in the family of Mr. L——, at Tooting, had the small-pox after the Cow-pox. I therefore wrote to Mr. L——; whose answer was to this effect.

He stated, that in the year 1793, he applied to Mr. Kent, of Reigate, to inoculate his child; that Mr. Kent brought matter, and inoculated the child, together with a niece of Mrs. L——; both of whom sickened at the usual time. The young woman is stated to have had eruptions; the child none. He is, however, said to have been feverish.

It is stated, that about six years after, the young woman was seized with the small-pox; that her child caught it of her, and died; and that she was expected likewise to die, but recovered.

Mr. L—— then states, that when an application was made to Mr. Kent, respecting the circumstance, he replied, that the matter used in these inoculations was not that of the small-pox, but the Cow-pox.

About thirteen months before this account was written, Mr. L——'s child is stated to have had the small-pox.

This story is sufficiently circumstantial; and wants nothing to recommend it,—but truth.—How far this requisite is wanting, let any person judge, from the following respectable evidence.

Copy of a letter from Arthur Jones, Esq. of Priory-House, Reigate.

Priory, Reigate, Mar. 4, 1801.

"Sir,

"I duly received your letter of the 1st instant, and by the same post wrote to Mr. Kent, who is now settled at Dorking, requesting his answer to the statement, the truth of which you are desirous of ascertaining. You have herewith a copy of his letter; which most completely refutes the account transmitted to you from Tooting. It was impossible that I should not anticipate Mr. Kent's answer; being satisfied that the Cow-pox was never heard of in this parish, till within the last two or three years, at farthest. Most of these reports are, as you must have experienced, too ridiculous to merit attention.—Neither is that ignorance, to which they may sometimes be imputed, a sufficient excuse, in my mind at least, for the mischief and uneasiness they must inevitably occasion.

"In the poor-house, for five parishes united under

Gilbert's act, established at this place, and of which I am the visitor, upwards of ninety persons were about three months since inoculated with the Cow-pox.—Within these few days, a poor person of this parish having sickened with the small-pox, in the natural way, I have desired the surgeon to inoculate six or seven of the late Cow-pox patients, with the small-pox; in order that, for the greater satisfaction of the inhabitants of the united parishes, they may have local evidence of the efficacy of the inoculation for the Cow-pox.—No doubt can be entertained of the result; and I only mention the case, not being acquainted with the purport of your intended publication, thinking you may probably judge it worth your notice.

"I am, Sir, &c.

"ARTHUR JONES."

Copy of Mr. Kent's letter to Mr. Jones.

Dorking, March 3d, 1801.

"SIR,

"On referring to my books, I find that I inoculated some of Mr. L——'s family in May 1793; but cannot, at this distance of time, recollect the particulars of each case. I find that I had no other under inoculation at the same time; therefore cannot now say, whence the matter was procured. As to its being the Cow-pox, I had never such an opinion; and assure you, no application was ever

made to me on this subject, till I received your letter. From what this has originated, I know not."

"I am, Sir, &c.

"M. KENT."

Another specious report has given me no small trouble; not indeed so much in detecting the fallacy, as in exposing the misrepresentation, and endeavouring to prevent the ill consequences which might otherwise have ensued.

A medical man industriously propagated a report, that he had just ascertained the duration of the preventive power of the Cow-pox to be just two years, as he had always suspected; that a child whom he had inoculated with the Cow-pox two years before, had lately had the small-pox.

Having heard this gentleman declare himself adverse to the practice, and say, he had not begun it, long after the time of this pretended vaccine inoculation, I determined to investigate the case; and was soon convinced, that it would not bear the touchstone of enquiry.

To prevent any tergiversation, I desired a gentleman to accompany me; who, if necessary, will bear witness to the following statement.

First, I asked, whether the report which I had heard, relative to the small-pox occurring after the

Cow-pox, was true? and was answered in the affirmative. The practitioner added, that he never was so much surprised in his life, as when he received a letter from the father of the child, giving an account of his having had the small-pox —This was rather extraordinary, since he declares, it is what he had all along expected.

I then asked, where he had procured the Cow-pock matter? He replied, that he met Mr. U——, and asked him for some *small-pox matter;* and that Mr. U—— put his hand in his pocket, and gave him an armed lancet.

I remarked, that he said, he had asked for *small-pox matter.* This he confirmed; but added, that in the patients inoculated with it, no eruption was produced; and therefore he had concluded it was *Cow-pock* matter.

He then told me, that the sister of the child *had a slight eruption,* which was a contradiction of what he had just before asserted; but that the child himself had none.

This inconsistent narrative I related to Dr. Jenner; and informed him of my intention to enquire farther into the affair. He thought it too contemptible to deserve so much notice. In this opinion I acquiesced: but a few days after, hearing the same report from a professional man of great respectability, no

time was to be lost, for explaining the merits of the case to the parents of the child, and others who had been imposed on.

I was informed by the parents, that they had never been undeceived, with regard to the matter with which the child had been inoculated; that the local affection on the arm was exactly similar to what was excited by inoculation with the small-pox, in another of their children, two years before; and that it consisted of a pustule full of thick matter, surrounded with four or five others of the same kind.

I was informed by an eminent surgeon in the neighbourhood, that a friend of his, who has had great experience in inoculation, gave his opinion, that the matter used was of the variolous kind. This conclusion he drew from the pustule being surrounded with eruptions. At that time, he had not heard, under what name the contagious fluid was obtained.

Some gentlemen took matter from the small-pock pustules, which lately appeared; in order to ascertain, what, if I am rightly informed, was so evident, as not to admit of a reasonable doubt. This is the way to increase the mischief a hundred fold.

Instead of this, it was their duty to enquire, whether the child had in reality ever had *the Cow-pox*.

I have since called on the gentleman from whom the matter was procured; who assures me, that he never gave the practitioner in question any other than that for which he asked.

It must be recollected, that the other child, who was inoculated at the same time, had an eruption, which was general, though slight.—Whether the insufficiency of the pustular appearance on the arm, as a preservative against future infection, arose from its locality, or from the matter having become inert, in consequence of being carried in the pocket, it is impossible to determine.

I shall not notice all those idle and unauthenticated paragraphs, which we meet with in the daily prints. Nor is it reasonable, that the enemies of vaccine inoculation, and friends to themselves, should expect us to refute all their falsehoods, as fast as they can invent them.

One of them asserts, that a child lately had the small-pox, who had before had the Cow-pox; and in whom the eruption was fully produced. This is said to have happened in Essex. The case was published by an obscure practitioner, who cannot live without the small-pox. It was evidently a case of spurious Cow-pox; and his correspondent is *an Essex calf.*

Paragraphs like these, without a name, and asser-

tions like these, without a shadow of proof, can only delude the vulgar. In the mean time, the new practice is gaining such an ascendency, as bids defiance to the feeble efforts of all its opponents; and the most sanguine hopes of the friends of vaccine inoculation continue to be realized, both at home and abroad.

Dr. Marshall, in a letter dated Valetta, Dec. 18, 1800, has favoured me with the following important information.

He and Dr. Walker arrived at Malta on the 1st of that month; and, the day after, inoculated several children in the Foundling Hospital, in whom the disease appeared with its wonted benign aspect.

Dr. Marshall says, We intend, in a few days, to subject them to the test of the small-pox; after which, there is no doubt that the whole island will participate in this most beneficial discovery.

Lord Keith, and Sir Ralph Abercrombie, immediately on their arrival, issued general orders for the inoculation of the soldiers and sailors belonging to the expedition. Dr. Marshall declares, that in all their experience, they had not observed a single deviation from the usual mild and gentle appearance of the Cow-pox in England; nor had a single soldier or sailor been prevented from doing his ordinary duty.

It is now therefore evident, how little reason there was for the alarm excited with so much industry, that our brave tars were to be made the victims of experiment. Previous to this intelligence from Dr. Marshall, I received from Mr. J. Ring, an equally favourable account of the success attending Cow-pock inoculation at Chatham; which was communicated to him by the surgeon of the marine barracks.

This is the place to which recruits are sent, to be inspected by a general officer appointed by government; and where it is customary to inoculate those who have not had the small-pox, as soon as they arrive; which has for some time been done with the Cow-pox.

The demand for recruits has been so great, that the Cow-pock patients have not been entered on the sick lists. Consequently they are obliged to do the same duty as others; which they have hitherto done without inconvenience.

The advantage that will accrue, from the introduction of this practice in the army and navy of Great Britain, is incalculable.—War is attended with sufficient horrors; and will prove a sufficient scourge, without the aid of pestilence, and the ravages of the small-pox.

The vast armament which was at Malta, when Dr. Marshall wrote the dispatch above alluded to, con-

sisted of upwards of a hundred King's ships; and about the same number of transports; on board of which a large army was embarked. Should the small-pox happen to rage through such a fleet, in such a latitude, what havoc must ensue!

By a subsequent letter from Dr. Marshall, dated Valetta, Jan. 21, 1801, I received the following additional information.

"DEAR SIR,

"SINCE my last letter to you from this place, I have succeeded in my endeavours, beyond my utmost expectation. The inhabitants have generally come into it; and the Governor, Capt. Ball, has established an hospital for it, under the name of the Jennerian Institution for the inoculation of the poor.—It gives me no little pleasure that I have been instrumental in affixing the name of the discoverer to this disease; a name which will be remembered with gratitude, to the latest posterity.—The example of this little island, which has so promptly stepped forward, and been the first, out of England, to set the example, in establishing the present institution, for the most benevolent of all purposes, will, I hope, soon be followed by other countries; and we shall speedily hear of the Jennerian disease having totally eradicated the small-pox.

"The progress of the Jennerian disease here, after inoculation, is marked with no variation from its

usual appearance in England; nor is it in the least aggravated.—I enclose you a small paper; which I wrote, at the request of the Governor, and which was distributed through the different towns and villages of this island.—The last part of Dr. Jenner's treatise is now in the press; and as soon as I have an opportunity, I shall send you a copy. A curious case has occurred here; in which I inoculated a patient with the Jennerian disease, after she had been infected with the small-pox naturally; but which, at the time, was unknown to me. The particulars I have related to my friend Dr. Jenner; who will shew them to you."

In the case here alluded to, the inflammation of the arm, and the pustule, proceeded in the usual manner, till the sixth day; when a thin sprinkling of pustules appeared over the whole body. The pustule on the arm then died away; leaving only a scab behind. The small pocks on the face and body continued two days; when they also died away; and about fifty only, which were situated on the hands and feet, came to complete suppuration.

Dr. Marshall, and two other physicians who attended the case with him, were of opinion, that the Cow-pox had considerable influence in checking the violence of the small-pox.

The paper drawn up by Dr. Marshall, at the request of the Governor of Malta, gives a short ac-

count of the rise and progress of the new inoculation in this kingdom; and of its propagation in foreign parts. Dr. Marshall observes, that this useful practice is now rapidly spreading over the whole continent of Europe; and that the island of Malta is not the last, to enjoy the benefit of Dr. Jenner's most excellent discovery.

The paper then proceeds to state, that Dr. Walker was on board the fleet, inoculating the soldiers and sailors who had not had the small-pox, by order of Government; but Dr. Marshall remained on shore, to instruct medical practitioners, and inoculate all those who thought proper to submit themselves to that operation.

We are then informed, that since the arrival of Drs. Marshall and Walker, several persons had been inoculated, in the presence of Dr. Carnana; who had visited the patients with Dr. Marshall during the progress of the disorder; and with him was ready to attest, that if they had not previously known of inoculation having been performed, they should not have perceived the least symptom of any disease.

They also express their full conviction, that the Cow-pox is an infallible preservative against the small-pox; those who had undergone the process of vaccine inoculation having been subjected to the test, both of inoculation with variolous matter, and

of exposure to the infection of the natural small-pox, but in vain.

The comparative advantages of the Jennerian practice are then stated; and a hope is expressed, that the whole island will be convinced of the virtue of the Cow-pox, as a preventive of the small-pox; and adopt the practice.

In the Medical Journal for April, 1801, are some extracts of a letter from Dr. Marshall to a friend in London. By these we learn, that Dr. Marshall and Dr. Walker had been fully occupied in accomplishing the object of their mission; and that their presence had been extremely seasonable; the small-pox having been at Minorca, on board the fleet, and at Malta.

Some of those who had been inoculated with the Cow-pox, were afterwards subjected to the test of inoculation for the small-pox; in the presence of the Governor, the Tunisian ambassador, the British consul, many of the clergy, and the medical practitioners of the island. The experiments were crowned with complete success.

From that period, the Governor has placed a perfect confidence in this practice, with regard to its efficacy in checking the ravages of the small-pox; and exerted himself in promoting its propagation, in

the district under his command. He has not only founded the Jennerian Institution; but he has also had Dr. Jenner's work translated, and printed for the use of the inhabitants.

We are told, that the Governor is the idol of the Maltese. He is establishing a Botanic Garden. He interests himself in their hospitals, and public regulations. He conciliates the inhabitants, by reminding them of the service which England has rendered the people of Malta, by the introduction of the Cow-pox; and offers the benefits of the Jennerian discovery to the whole island. In short, it may be doubted, whether Paul himself, had he succeeded in the favourite object of his ambition, would have made a better Grand Master of Malta than our gallant countryman, Capt. Ball.

We are informed, that in consequence of the small-pox prevailing amongst them, the nobility, as well as the mass of the people, pressed in crowds; in order to avail themselves of the advantage of vaccine inoculation. At the commencement of this auspicious practice, the missionaries, Drs. Marshall and Walker, preceded by the Governor and the clergy, walked in procession to the Hospital; the medical men of the island bringing up the train.

The Governor has given Dr. Marshall and Dr. Walker the most beautiful palace of Valetta, formerly that of the Grand Master of Malta, for them

to reside in; and, by his warm patronage of this valuable discovery, shewn his ardent zeal for the honour of his country, and the universal happiness of mankind.

Dr. Marshall concludes his letter with the following intelligence; which is too interesting to be omitted.

"Amongst the fleet and army also, our endeavours have been very successful. The small-pox was ravaging, and had been very fatal; but it now seems to be extinct. Lord Keith and Sir R. Abercrombie have shewn us every kindness. His Lordship particularly recommended the Jennerian inoculation to the fleet; as you will see by an extract from the Admiral's memorandum, in consequence of the small-pox raging in the Alexander, and other vessels."

"*Foudroyant, Malta, Dec.* 9, 1800.

"The Commander in Chief thinks it necessary to recommend to the respective Captains, an immediate application to Dr. Marshall and Dr. Walker, whose safe and excellent mode of treatment has been experienced on board the Foudroyant and other ships, in preventing the dreadful effects so often attending the small-pox; which may now so easily be avoided, without danger or inconvenience.

"By command of the Vice Admiral,

"W. Young."

It being impossible, on account of the short stay of the fleet here, to complete the inoculation; it was necessary that one of us should accompany it; and the enterprising spirit of Dr. Walker could not rest, till it was determined that he should go. Since he went, I have inoculated the whole of the troops left here under the command of general Pigot. I have had to combat the prejudices of the people, to convince them of its efficacy; and can say, that I have at last conquered. By a frigate which came in here last night, I learn, that the fleet and the army were, on the 13th instant, in the bay of Mermere, in Asiatic Turkey; and that Dr. Walker is very busy in attending to his patients. The Dey of Algiers is very anxious to have our inoculation introduced into his dominions; so that there scarcely appears to be a prospect of the termination of our labours.

Dr. Cappe has published in the Medical Journal, a few additional remarks, on the preservation of matter. He put two bits of glass together, while the matter with which they were charged was still moist. With this, when sixteen weeks old, he produced a pustule, which appeared in a regular form; but the patient had twice scratched off the surface of the rising vesicle; so that, I apprehend, no experiment was made with the contents.

Dr. Cappe observes, that since matter confined between two pieces of glass, while moist, has appeared by experiment to retain its specific property

so well, this method is convenient, for keeping it in a fluid state, when it is to be used in a short time. He admits, however, that no advantage could be derived from preserving it fluid, if that were possible, for any considerable time, since in a dry state it is less likely to suffer a chemical change.

It is much to be wished, as Dr. Cappe observes, that the blessings of Dr. Jenner's great discovery were imparted to our distant colonies; and if easier methods fail, that it may be conveyed to any place, however distant, by successive inoculations, during the voyage, either in the brute animal to which we are beholden for this preservative, or in the human subject.

The next article on the subject of vaccine inoculation, with which the Medical Journal presents us, is a communication from Mr. Pole; giving an account of a case, where the Cow-pock inoculation arrested the progress of that of the small-pox.

The next article of intelligence on the same subject, is a case communicated by Mr. Boswell, surgeon of the Gibraltar. In August last, thirteen of that ship's crew had the small-pox. One man, who had casually received the vaccine infection, while he lived with a farmer in Devonshire, being appointed to attend the sick, and never having had the small-pox, was anxious that Mr. Boswell should inoculate

him; which he did, and, to secure success, inserted the variolous matter in both arms.

On the fourth morning, Mr. Boswell found a considerable degree of inflammation, which appeared to him, to indicate a certainty that infection had taken place; but in six days more, the inflammation totally subsided, without any pustule having formed. At the expiration of three weeks, Mr. Boswell again inoculated him in the same manner; producing exactly the same appearance as before.

The same number of the Journal, which, like many of the preceding, is rich in intelligence relative to the vaccine disease, contains a letter from Dr. De Carro to Dr. Jenner, dated Vienna, Feb. 14, 1801.

This celebrated physician, who has signalized himself as the Jenner of the continent, is about to publish, in French and German, an elaborate history of this inoculation; dedicated to Lord Minto, as minister of the nation where the discovery took place.

After informing Dr. Jenner of the success of a clergyman at Brunnam Gebizg, who from the pulpit had exhorted his parishioners to avail themselves of the advantage of one of the greatest blessings ever bestowed by Providence on mankind; he observes, that if the example of this benevolent divine were followed by the clergy in general, it would in some

degree repair the waste, and heal the wounds of this destructive war.

We are informed by Dr. De Carro, that a young nobleman, Count Francon Hugues de Salm, particularly distinguishes himself by the encouragement which he gives to this inoculation at Brun, the capital of Moravia.

He went to Vienna, on purpose to enquire of Dr. De Carro, the oracle of Germany, the best mode of introducing the practice into his own country. He took the trouble of examining into the nature of the disease; and observing the appearance of the pustule. He read all the treatises he could collect on the subject; and addressed an exhortation to the people of Moravia, urging them to profit by this valuable discovery.

He has offered two prizes, for the two Moravian physicians, who shall inoculate the greatest number in the course of the year. He has engaged intelligent physicians, to assist in these inoculations, in a part of his father's house, devoted to that purpose.

What is most singular, he has written a very good history of this discovery; which he has distributed among all the clergy and schoolmasters of Bohemia and Moravia. These form associations; which are under the direction of Dr. De Carro. From him they

have their vaccine matter; and to him they send an account of all their proceedings.

Too much cannot be said, in commendation of the patriotism and the philanthropy of this young nobleman. In erecting this humane institution, he has erected an eternal monument to his fame.

The editors of the Journal observe, that the practice has not hitherto met with equal encouragement in England. They express a hope, in which every man who has a just sense of the merits of the discoverer must coincide; that the reward to be conferred will not be the less, for being delayed till the value of the discovery is more fully ascertained.

Such is the importance of the information received in this letter from Dr. De Carro; that I have no reason to regret the unavoidable delay which various unforeseen causes have occasioned, in the publication of the present work.

We have now the satisfaction of knowing, not only that the practice is rapidly spreading through Germany; but also that it is introduced by Dr. De Carro into the Venetian state; where it is cultivated by Dr. Moreschi, an intelligent physician, with the greatest success. Dr. De Carro is far from considering this practice, as proper to be committed to the hands of inexperienced and unscientific men.

He says, Dr. Moreschi has begun his inoculations at Venice with the children of people of the first rank. He has no doubt that their example will readily be followed, and that Italy will soon enjoy the benefit of Dr. Jenner's discovery.

He adds, "the German physicians are so perfectly convinced of the advantages of this inoculation, that they have printed a short and popular exhortation to the people; which has been put into the hands of the clergymen; who are ordered to deliver a copy of it to the father and godfather of every child, who is brought to church to be christened.

But among all the triumphs of this important practice, to which Dr. De Carro has been instrumental, on the continent of Europe, he considers none as more interesting than its introduction at Constantinople, under the auspices of Lord Elgin, the English Ambassador; who thus discharges the debt, which England and all Europe owed to the Turks, for the inoculation of the small-pox.

By the same journal we are presented with a translation of the address, from the Medical Committee for Vaccine Inoculation, to the Mayors of the twelve sections of Paris; of which the substance is already given in this work.

The next article in the Medical Journal, is another contribution to this new department of medical sci-

ence. It is a communication from Mr. Hutchinson, of the Manchester Infirmary, who observes, that since the Cow-pox became an object of general attention, the world has been greatly indebted to that Journal, for the early promulgation of whatever has conduced to a more intimate knowledge of the disease.

Although Mr. Hutchinson's situation, as house-surgeon to the Manchester Infirmary, had afforded him frequent opportunities of observation, yet he had hitherto refrained from communicating his ideas on the subject, because he wished to comprise the essence of many particular cases within the compass of a few general remarks.

He observes, that the information respecting the Cow-pox, has not only been very extensive, but also contradictory; which renders it difficult, either to recollect or discriminate, the real or imaginary progress made, in elucidating its nature.

Mr. Hutchinson is of opinion, and his opinion is unquestionably well-founded, that the general introduction of the Cow-pox has met with one obstacle in its own mildness. This, how little soever it agrees with the character of "a nation of philosophers," agrees with actual experience, and a knowledge of the manner in which this discovery has been received, by a considerable part of the community.

The ingenious author informs us, that "several cases have occurred, which, independent of any conclusions drawn from its actual prevention of the small-pox, clearly evince, and beautifully illustrate, its action on the system at large. When children have any cutaneous eruption, at the time of inoculation, he has always observed it increase considerably about the sixth, seventh, or eighth day: after that period, it is either greatly diminished, or it totally disappears.

This, he says, evidently proves the affection of the Cow-pox to be general. He also says, as an argument in favour of the same opinion; when one arm is more slow in producing a pustule than the other, it ultimately produces one *nearly similar*. It would have been a better argument in favour of the affection of the Cow-pox being general, and more consistent with actual observation, to have said, that the pustule which appears last is *smaller than the other*, in proportion to the time that its appearance has been delayed.

Mr. Hutchinson has remarked, that where debility prevails in the habit, such person is more difficult to be infected. This is what has been observed by every inoculator for the Cow-pox. He says, if this distinction is well founded, it ought perhaps to influence our practice, as to the *number* or *depth* of *incisions* that we make. *Horresco referens!* A single superficial puncture in each arm, well saturated with

active fluid matter," will generally succeed; and if it fails, may safely be repeated. This can scarcely bring disgrace on the practitioner, or disgust the public with the practice. But when we hear about the number and depth of incisions, and recollect the various instances where butchery has been employed in inoculation, instead of surgery, it is enough to make the stoutest heart tremble.

Mr. Hutchinson observes, that those who have a strong fibre, not only receive infection more readily, but have a greater degree of constitutional indisposition. This is true; and seems to depend on the greater degree of the local affection. In two instances, he has known convulsions precede the acme of the disease, in such habits. He admits, however, that other causes were present, to which they might be imputed. Mr. Duke, surgeon of Suffolk-street, met with a case, where a child had convulsions; but that child was at the age of teething. The gums did not indicate, that the teeth were the cause; but we know that convulsions often occur at the age of dentition, even when the gums are not swollen.

Mr. Hutchinson wishes to know, whether a patient is to be considered as secure from variolous infection, who has broken the pustule about the seventh day? My experience induces me to believe, that the rupture of the vesicle, at that period, by no means lessens the security of the patient; *provided* it can

be ascertained, that the pustule was genuine: but it is always most prudent, in such a case, to re-inoculate the patient, lest the practitioner should have been deceived by the spurious pustule.

Dr. Willan has lately published a work entitled, "Reports on the Diseases in London;" in which he has fully expressed his sentiments on the subject of vaccine inoculation.

On this subject, he thinks, observations may now be made with confidence. He affirms, that "this new mode of inoculation, *when properly conducted*, affords a decided and permanent security from the infection of the small-pox. Being thus certain in its effects, it is preferable to the inoculation with variolous matter, for several reasons.

Among others, which have already been enumerated in the course of this treatise, he observes, that "it produces but little pain or fever, and no pustular eruptions; that it is not communicable by effluvia; and that he has not known it produce any other disease."

In order to ascertain, whether immediate inoculation with vaccine matter, has the power of superseding the infection of the small-pox, Dr. Willan inserted the vaccine fluid in two instances; but without success. The confluent small-pox appeared, before the vaccine pustule arrived at its height. Judging from

this early appearance of the small-pox, and its confluent nature, I cannot help suspecting that the infection had been received at an earlier period than the patients, or their friends imagined.

The different opinions which Dr. Willan has delivered, in this report on the Cow-pox, concerning the co-existence of that disease and the small-pox, appear to me rather contradictory.

First he says, " If vaccine and variolous matter be inoculated at the same time, or within a week of each other, into the same person, the vaccine pock goes through its regular stages; and the variolous pustule on the arm, after exhibiting the usual appearances, is succeeded by an eruption of small pox over the surface of the body.

" From this fact, which has been confirmed by hundreds of trials, some inferences may be deduced, which are of material importance. 1. That vaccine fluid should not be taken, for the purpose of inoculation, on a lancet which has been previously employed in inoculating the small pox. 2. *That the variolous and vaccine virus do not interfere with each other's action on the human constitution, while they are merely in progress, without having had their full operation.*"

He afterwards says, " When the small-pox and vaccine disease had been inoculated about the same

time, *the eruptions were, in all the cases I saw at the Hospital, of the species vulgarly termed Horn-pock;* being *hard*, and *semi-transparent.*"

These are, indeed, the genuine characteristics of the *Horn-pock;* but such is the skill, and such the vigilance, of our state-physicians, that, I hope, it will never be suffered to spread.

During the time that Dr. Willan attended the Hospital for Dr. Woodville, when that gentleman was gone to Paris, four instances occurred, in which the vaccine patients had previously received variolous infection. In these cases, "eruptions appeared, on different days, between the third and the eighth from inoculation. *The pustules were distinct,—large, and full of matter.*"

Here it is probable, that the small-pox, which preoccupied the habit, suffered little or no modification from the Cow-pox. It is, however, worthy of remark, that the disease was favourable. But in those cases, where the patients were inoculated with vaccine and variolous matter about the same time, the pustules were of the species already mentioned, *viz.* the Horn-pock. *They contained but little fluid;* and, though of long duration, *did not maturate*, or break by suppuration.

If this *tertium quid* is not a hybrid disease, what is?

Dr. Willan himself says, "Whether we should, from these premises, infer that the two diseases, when communicated together, limit each other's operation on the human body, so that the small-pox may be checked, or the vaccine disease be variolated by inoculation, by exposure to an infected atmosphere, &c. or whether, as I had before *ventured to conjecture*, they go through their course, in the same person, at the same time, without influencing each other, *must be decided by farther experiments.*"

It appears to me, that nothing can well be more positively decided, than this has already been. If Dr. Willan's statement of what he saw himself is correct, in all the cases where the small-pox was inoculated with the Cow-pox, it was modified; and metamorphosed into the Horn-pock.

It is also due to consistency to remark, that Dr. Willan does not merely *venture to conjecture*, that the small-pox and the Cow-pox, when inoculated at the same time, or within a week of each other, pass through their regular stages, and do not interfere with each other; but observes, that inferences which are of material importance, may be drawn from this fact; which he says, "*has been confirmed by hundreds of trials.*"

After this, it was hardly to be expected, that we should be told, this point "must be decided by farther experiments;" or that we should meet with the

following expression.—" On this subject I trust, the physician of the Small-pox Hospital, who has the best opportunity of employing the necessary tests, will use every exertion in his power; and communicate his observations to the public with his usual candour."

Happy would it be for the world, if too many opportunities of *employing the necessary tests*, in as great perfection as possible, did not occur in every part of this great metropolis every day. I trust, the ears of Dr. Woodville will not be so much tickled by this compliment, as to prevent him from exercising his good sense on the occasion. I trust he will not abuse the confidence of the governors, and the patience of the public, by making such useless, wanton, and inhuman experiments, for the sake of gratifying the idle curiosity of any person whatever.

If this "asylum opened by public benevolence," as Dr. Willan justly terms it, is to be perverted from its original design, if it is to be turned into a hot-bed for the multiplication of diseases, and to become a hospital for trying *such* experiments, I hope its favours will be confined to certain malefactors, whom His Majesty shall be pleased to pardon on that condition.

In the annals of medicine for the year 1800, is an account of the Vaccine Institution in London, founded Dec. 2, 1799.

The plan of this institution has been extensively circulated. I shall, however, subjoin a list of the very respectable patrons, and medical officers, who honour the vaccine inoculation with their support, and diffuse the benefits of the practice. It is as follows.

President——

Vice-Presidents . . .—Rt. Hon. Lord Petre.
Sir William Lee, Bart.
Sir George Baker, Bart.
H. J. De Salis, D.D.
W. Adam, Esq. M.P.
W. Devaynes, Esq. M.P.

Treasurer . . . . . —Stephen Aisley, Esq.

Physicians . . . . . —George Pearson, M.D.
Lawrence Nihell, M.D.
J. Nelson, M.D.

Consulting Surgeons —Thomas Keate, Esq.
John Rush, Esq.

Surgeons . . . . . —Robert Keate, Esq.
John Gunning, Esq.
J. C. Carpue, Esq.

Visiting Apothecaries—Aug. Brande, Esq.
Francis Rivers, Esq.
Everard Brande, Esq.

Resident Apothecary—Mr. John Lewis.

It must give peculiar pleasure to the friends of this practice, to observe, that it is honoured with the sanction of that distinguished character; who presided

over the College of Physicians so many years; and filled that important office with so much dignity.

In the same volume of the Annals, is a communication from Mr. Williamson of Anstruther; who had inoculated 150 children with the vaccine disease. Most of them had since been exposed, on many different occasions, to the infection of the small-pox; but without effect.

In one instance, a few pustules maturated. Whether this was owing to a variolated atmosphere, the small-pox having raged in the neighbourhood, it is not for me to determine. It must, however, be remarked, that Mr. Williamson when he endeavours to account for the varioliform eruption, refers to cases, which were avowedly cases of the small-pox.

Mr. Williamson informs us, that he has no reason to believe the genuine Cow-pox has ever appeared in the county of Fife; either from enquiries which have been made, or from his own observation.

We are next informed by the same respectable channel of medical news, that institutions for vaccine inoculation are now established in various parts of Great Britain; and that in almost every part of the island, the most intelligent and humane practitioners are exerting their utmost endeavours, to introduce the practice as generally as possible, among the lower class. This, as they observe, may be done with so

little trouble, and at so little expense, that there is great reason to hope, it will soon put an end to the fatality of the small-pox.

The learned editors bestow a just encomium on the plan of vaccine inoculation adopted by the city of York; as one of the most judicious, the most practicable, and they might have added, one of the most liberal, of all that have hitherto been proposed. It may, therefore, serve as a model, till a better is devised. Of this excellent institution an account is already given. We have the pleasure of hearing, that the Directors of the Edinburgh Dispensary have adopted a similar plan.

Hence, the learned editors observe, there is reason to hope, that the new inoculation will soon be adopted by many of the lower class; at least, if they can *prevail upon themselves*, not to neglect the means which providence has put in their power, for preserving the lives of their offspring against the ravages of a most dreadful disease.

We are told, that among people of *higher rank*, in Edinburgh, vaccine inoculation has made a rapid progress; owing to the example and admonition of medical practitioners. The poor, it seems, in Edinburgh, as well as in too many other places, are left to *prevail on themselves*. Point d'argent, point de Suisse.

The extension of this useful practice over the rest of Scotland, as well as in the metropolis, as the editors observe, has been particularly owing to the meritorious exertions of Dr. Anderson of Leith; of whom such honourable mention was made by Dr. Mac Donald of Hamburgh, in his ingenious dissertation on this subject.

Dr. Anderson informs Dr. Duncan, that vaccine inoculation is now preferred to variolous; and that many parents have consented to have their children inoculated with that mild disease, who were before averse from the practice.

Dr. Anderson had inoculated between two and three hundred; and his practice was attended with uninterrupted success. There was not a single case, in which febrile symptoms lasted above an hour or two. There was not, in any case, the most distant appearance of convulsions; and in no case, during the last year, a single pustulous eruption.

Applications for matter were frequent; insomuch, that within the space of two pays, Dr. Anderson had sent a supply of that article to surgeons at twelve different towns in Scotland. The matter he has used, is of the stock of Jenner. It still possesses all its original virtue; notwithstanding its frequent transmissions through the human subject.

I cannot take leave of this philanthropist, who has

laboured so strenuously to diffuse the blessings of the new inoculation, without offering him a most sincere tribute of respect and applause. *Macte novâ virtute.*

The editors of the annals declare, that although many thousands, in different parts of Scotland, have now undergone the vaccine disease, yet they have not heard of a single well authenticated instance, in which it proved fatal; and in by much the greater number of cases, the affection has been so inconsiderable, that it has consisted merely of a single pustule on the arm, with a very slight degree of fever, lasting only a few hours.

" That the vaccine disease affords complete protection against the natural small-pox, has been demonstrated in the most convincing manner, on many different occasions, at Edinburgh and in its neighbourhood. Children who have had the Cow-pox, have not only resisted repeated inoculations with variolous matter, but have also been frequently exposed, with impunity, to the natural contagion of the small-pox of the worst kind.

" This particularly appeared in the village of Newhaven, where, during the course of last spring, the confluent small-pox proved fatal to many. A considerable number of children, at that place, who had been inoculated for the Cow-pox, completely resisted the contagion of the small-pox; although some of

them lived under the same roof, and were daily at the bed-sides of those to whom the small-pox proved fatal.

Dr. Wilson of Montrose informed Dr. Duncan, that he was long an opponent of vaccine inoculation; *being in want of a theory.* This candid confession, at the same time that it reflects honour on Dr. Wilson, is a severe satire on medical vanity, and the jargon of the schools.

Where the evidence of facts is wanting, we may be permitted to substitute hypothesis; which is too often called reason. I have been gravely assured by some ingenious men, that they will adopt the inoculation of the Cow-pox, if I can convince them, *by reason*, that it is an infallible preventive of the small-pox.

In pride, in reas'ning pride, our error lies.

Dr. Wilson informs Dr. Duncan, that the weight of medical testimony which has appeared, induced him to adopt it; and he is now persuaded, that the constitution, having undergone the action of this mild morbid poison, is no longer susceptible of variolous contagion.

When he began vaccine inoculation, the confluent small-pox was fatal in his neighbourhood. Nothing however appeared in any of the patients inoculated with vaccine matter, to give cause of alarm; and the parents of the children who were inoculated seemed

quite at ease; and had perfect confidence. He says, "They were, in general, people of the first rank in society; and consequently persons of observation."

Dr. Wilson states, that his practice was attended with the best success; the disease having assumed the true Jennerian type; with very mild symptoms, and little or no constitutional affection.

Neither Dr. Wilson, nor Dr. Melville, of St. Andrew's, had been able to discover any trace of the genuine Cow-pox in Scotland. The latter informs Dr. Duncan, that he also had inoculated with vaccine matter; and that, in a number of trials, it had succeeded to his wish. No pustules had appeared; and the patients, when exposed to the natural small-pox, did not receive infection.

Dr. Kennedy, of Inverness, says, No disease, denominated Cow-pox, is known in that neighbourhood.—Dr. Campbell, of Argyleshire, says, No disease, distinguished by the name of Cow-pox, has ever been known there. By the concurring testimony of all these gentlemen it appears, that the cows are subject to a spurious kind of pustules; but it is not known, that they have ever proved infectious.

Dr. Campbell observes, that if Dr. Jenner's opinion of the origin of the disease be well founded, we should not expect to meet with it in Scotland; since in that country, men who have the care of

horses, have no concern in the milking of cows. Purulent eruptions, indeed, appear; but they are always benign, and heal without any application. He has never known them communicate infection.

From the foregoing, and many other letters, Dr. Duncan is inclined to conclude, that the genuine Cow-pox is unknown in Scotland.

After a variety of other intelligence on this head, we are favoured with a letter from Dr. Waterhouse; the necessity of which in this place, is precluded by the review already given of his pamphlet.

But, we are told, "Another ingenious American practitioner, in a letter dated Ipswich, Massachusetts, Oct. 3, 1800, to a friend in Edinburgh, gives the following information:—The Kine or Cow-pox is introduced here; and is rapidly becoming very general. It is already at various places; and there can be no doubt of its universal diffusion, as fast as matter can be obtained by practitioners.

"Professor Waterhouse's occasional publications have done much, in preparing the way for this benign substitute for the terror of the fair; and his practice has done still more, in introducing it. I have inoculated many; all of whom either have done, or are doing, extremely well."

Every month now teems with abundant intelli-

gence, of the most flattering kind, on this important subject.—The Monthly Magazine, second to none, for the praise of imparting useful information, in the number for April, 1801, informs us, how rapidly the new inoculation is now spreading, over the face of the globe.—It is as follows:

"The Vaccine or Jennerian Inoculation, makes a more rapid progress upon the continent of Europe, than even the most benevolent and sanguine friends of humanity could have expected. One of our correspondents at Paris states, that its success in that city, where it was introduced by Dr. Woodville, exceeds even that in London. Another, writing from Frankfort on the Mein, speaks of its success in terms equally favourable. A third, from Berlin, describes its general adoption; and the King of Prussia has ordered those individuals of the Prussian army who have not had the small-pox, to be inoculated with the vaccine matter. Dr. Marshall, from Malta, writes, that an hospital has been established there, for its propagation; and that the first case of the inoculation took place in the presence of the Governor, the Turkish and Algerine Residents, &c. &c. He adds, that the Dey of Algiers has requested to have the practice introduced into his dominions. We learn from the Medical Repository of New York, that the practice has succeeded in most of the American States.

"In England, considering the obstacles opposed by ignorance, superstition, and the inveterate conceit

of aged practitioners, the new inoculation has been extended in a wonderful degree. It is however to be lamented, that the natural small-pox has occasioned a greater mortality during the last year than in many previous ones; and although the parents who do not cause their children to be inoculated for this safe and mild substitute and preventive, have reason, in fatal cases, to accuse themselves of having omitted to save the lives of their children, we do not expect that the vaccine inoculation will become universal, without some act of the legislature."

While the credit of the practice is thus supported by men of talents, in every respectable publication that appears, it is now and then attacked by some anonymous and contemptible scribbler, who is conscious that his name, if published, would injure his cause; or by some blockhead, who is ambitious to appear in print.

One of these dashes into the midst of controversy, *because he is determined to avoid it;* and writes on a subject, of which he professes to know *nothing at all at all.* This gentleman having been so kind as to subscribe his name, or his mark, it was possible to trace him out. The meaning of his anecdote it was not possible to trace out.

I therefore called on him, and asked him the particulars of the case. He said, he understood his letter was inserted in the newspaper of that day; but he

did not know whether it was properly *translated*, as he had not yet seen the paper.

The truth is, that the editors had not *translated* his account into English, or common sense, but published it in its own Hibernian style; otherwise it would have appeared, that this gentleman, being resolved to write on a subject which he did not understand, censures the Cow-pox without reason. He censures it, for not preventing the small-pox; although it was not had recourse to, till the infection of the small-pox had taken possession of the habit.

Of a very different kind is the following charge against the new inoculation. A clergyman of Eton informed his friend in town, that when officiating for another clergyman in the neighbourhood of Windsor, he attended at the burial of a young man, who had been inoculated for the Cow-pox by Mr. Henderson, of Wendover; and pronounced free from all danger of infection from the small-pox.

This information was communicated to me by my friend Mr. Blair. The clergyman took it down from the mouth of the young man's brother, in the vestry-room, after the funeral service. Such a report, coming through so respectable a channel, deserved every possible attention.

I therefore wrote to Mr. Henderson, in order to enquire what he recollected of the case; and in a

letter, which I received a few days after, he informs me, that he inoculated the young man on the 25th of December last; and on examining the arm on the 28th or 29th, found it inflamed as much as we generally find it at that period.

The young man then went to reside in the neighbourhood of Windsor; and Mr. Henderson never saw him again; consequently could not know that the patient would proceed regularly through the disease. We have, therefore, no reason to doubt, that the Cow-pock inoculation failed; and that the patient misunderstood the opinion which Mr. Henderson had given.

Mr. Henderson declares, that he never assured his patient, he was free from danger of the small-pox; nor could, at that period, give any such assurance. On the contrary, he declares, he cautioned him, not to be deceived by the appearance of the arm which then shewed itself, unless other symptoms took place.

From all the circumstances of this case Mr. Henderson declares he is of opinion, the man never had the Cow-pox. He informs me, that he has had many patients, whose arms were inflamed five or six days, and festered; without assuming the appearance of the vaccine vesicle.

In consequence of the death of this young man,

several persons whom Mr. Henderson had inoculated became greatly alarmed; and he inoculated as many of them as would submit, with small-pox matter; but none of them received infection.

It has already been observed, that a true pustule, either of the vaccine or variolous kind, may prove abortive; and disappear prematurely, without producing its proper effect on the constitution. Having been informed by Dr. Yelloly, that a child inoculated by Mr. Powell, at Chatham barracks, had the small-pox after being supposed to have had the Cow-pox, I wrote to Mr. J. Ring, at Rochester, begging the favour of him to enquire into the particulars of the case.

From him I learn, that the pustule arose at the usual period, and had nothing particular in its appearance, to distinguish it from a common vaccine pustule; but it began to die away on the eighth or ninth day, by which time, in general, it has not arrived at its height. The small-pox appeared a month after.

That the pustule contained genuine vaccine matter is evident; since Mr. Powell inoculated several others from this subject; all of whom were exposed to the contagion of the natural small-pox, and also were inoculated with variolous matter, but without effect. This case, therefore, seems to resemble that published by Dr. Harrison in the Medical Journal; and noticed in this work. Vide p. 492.

It is proper to remark, that the infection of the small-pox might have been previously received. Whether it could be so long suspended, by the vaccine disease, and perhaps some other indisposition, intervening, and lie dormant in the habit for a month, I shall not pretend to determine. In the first letter which I received on the subject, it is stated, that about 16 days after the Cow-pox, the small-pox appeared. "The small pox was then, *and had for some time been*, very prevalent in the barracks."

Since writing the above, I have received a note from Mr. Blair, informing me, that he has seen the Rev. Mr. Grace, who had communicated the case which occurred near Windsor to his friend, the Rev. Mr. Cecil; and that Mr. Grace now suspects, the young man never had the Cow-pox.

At the same time Mr. Blair favoured me with the perusal of a philippic against the practice. This affords a specimen of the talents by which it is opposed. Mr. Blair having inoculated a child for the Cow-pox, this gentleman expressed his surprise at it; and informed the father of the child, he could tell him of some very discouraging circumstances respecting that disease.

In consequence of this, Mr. Blair wrote to the practitioner, intimating, that he should deem it a favour, if that gentleman would communicate in writing the precise nature of the facts alluded to.

The answer returned was,—" I have made up my mind, not to answer any letter addressed to me respecting the vaccine virus; but refer *them* to my letter addressed to Mr. B., surgeon, at Hampstead."

Thus it is the practice, for these adversaries of the new inoculation, to shelter themselves in darkness, like the bird of wisdom, when they give an alarm; but when exposed to the garish eye of day, the oracles are dumb.

From Mr. Higgins, surgeon, of the Strand, I am favoured with the following information. When he resided at Shaftesbury, above 16 years ago, it was a generally received opinion, that no person who had undergone the Cow-pox, was capable of receiving the infection of the small-pox.

Having written to Arthur Jones, Esq. of the Priory, Reigate, requesting to know the result of the practice at that place, he very politely returned me the following answer, in a letter dated April 12, 1801.

" Sir,

" I duly received your letter of the 2d instant, and, according to your desire, send you the particulars of the Cow-pox inoculation; and proofs of its efficacy, as experienced at the Poor-house of the united parishes at this place.

" I remain, &c.

" Arthur Jones.

" The number of persons inoculated in Reigate Poor-house, with vaccine matter, procured from the Institution in Warwick-street, was 93; *viz.* 88 on the 14th of December, 1801, and the remaining five, with those whose arms did not take, nine in number, on the 21st. The failure of five or six of the 88, in not taking the Cow-pox, when first inoculated, was attributed to their having lately been anointed for the itch; and not being thoroughly cleansed from the ointment. No instance of any alarming inflammation, or fever, occurred; nor was there an instance of the patient's not being able to work as usual. They were chiefly children; but there were some exceptions of men, from 60 to 70 years of age. It may be worthy of notice, that the 88 were inoculated from one pustule.

" Two months after this inoculation, an opportunity occurred of procuring some small-pox matter, from a patient in the neighbourhood, who had that complaint in the natural way; when, at the desire of the Visitor, five of the above persons were taken indiscriminately, and inoculated therewith. In four of these cases, a slight degree of inflammation took place in the arm, where punctured; and, in one of them, it continued a week; but occasioned no fever, or affection of the system whatever.

" T. Steel, Surgeon.

" The person from whom the variolous matter was taken, is the daughter of a labouring man in Mr.

Jones's service; and came home from her place sickening with the small-pox. Though she continued at her father's house but one night, previous to her removal to the Pest-house, with which place the family have not had any communication, they have all successively sickened, and been sent to the same place."

Who can read this account, and not feel a pang for a whole family, thus unexpectedly plunged into the deepest affliction, and perhaps into the gulph of irretrievable ruin, by that merciless disease, the small-pox? What inventor, or reporter, of all the idle fictions relative to the new inoculation, can read this affecting narrative, of a whole family torn from their homes, robbed of every domestic comfort, and doomed to suffer all the torments of a terrible distemper, and all the miseries of a Pest-house, and not relent?

———Duris genuit te cautibus horrens
Caucasus, Hyrcanæque admorunt ubera tigres.

If any thing can aggravate the criminality of such a conduct, it is this, that by perpetuating the fomes of the small-pox at home, they perpetuate its exportation to foreign parts; and sometimes impart that curse to other nations; where, either from the climate being more unpropitious, or the treatment of the disorder less known, still greater mischief is occasioned.

The following anecdote was communicated to

me by Capt. Goddard of the navy, when he applied to me for some vaccine matter for his brother, a surgeon, of Wootton Basset, who had already practised the Cow-pock inoculation with success. It was communicated to Capt. Goddard by Sir Andrew Bayntun.

"Some years ago, the small-pox made its appearance in a tribe of Esquimaux Indians, on the coast of Labradore; and raged with unprecedented violence. Many of the natives fled, to avoid the contagion; nor did they venture to return till three years had elapsed; when their country was become a desart, without a living soul in it; but they found the skeletons of 500 persons, who had fallen victims to that horrible disease.

But we need not go far, to behold the ravages of the small-pox. Dr. Cappe ascertained the numbers who had perished in this metropolis, for a very considerable period of time, ending at the year 1777. He probably meant up to the end of that year. I have, however, procured a continuation of that register, as far as regards the total number of deaths, and the number of deaths occasioned by the small-pox, from that year inclusive to the present time. It is as follows.

Years.	Total died.	Of the small-pox.	Years.	Total died.	Of the small-pox.
1777	23334	2567	1789	20749	2077
1778	20399	1425	1790	18038	1617
1779	20420	2493	1791	18760	1747
1780	20517	871	1792	20213	1568
1781	20709	3500	1793	21749	2382
1782	17918	636	1794	19241	1913
1783	19209	1550	1795	21179	1040
1784	17828	1759	1796	19288	3548
1785	18919	1999	1797	17014	522
1786	20454	1210	1798	18155	2237
1787	19349	2418	1799	18134	1111
1788	19697	1101	1800	23068	2409

It was before observed, that neither the populous parish of Marybone, nor that of Pancras, in which the Small-pox Hospital and the Foundling are situated, is comprehended within the Bills of Mortality. It is also necessary to remark, that six or seven thousand persons are annually interred in the burial grounds belonging to the dissenters. Hence it is evident, that a far greater number perish by the small-pox, as well as by other maladies, in this great metropolis, than what reach the public eye. Is is therefore, with the most heart-felt satisfaction, we see the new practice daily spread more and more; and continually receive the most flattering accounts, of the rapid progress which it is making in all parts of the kingdom.

From the Rev. Mr. Jenner, who is lately arrived in town, I learn, that by perseverance in his laudable efforts, he has inoculated about 3000 persons in this mode. The efficacy of his practice has been put to a severe test. At Burbage, in Wiltshire, where he had inoculated about half the inhabitants of the parish, the small-pox since raged, and swept away a number of persons; but all those who had been inoculated by Mr. Jenner escaped, as if sacred from the ravages of that destructive pestilence.

One fact which Mr. Henry Jenner has ascertained, will, I hope, in some degree check the rage of useless experiment. I must confess, I know of no experiment with variolous matter, after this, which can be useful; unless it be putting those who have had the Cow-pox to the test.

He inoculated a person with vaccine matter, and also with variolous matter, at about two inches distance. It has been asserted, and the assertion has been reiterated in every part of this kingdom, and on various parts of the Continent, that, in such a case, the virus taken from the pustule produced by the insertion of vaccine matter, will be pure vaccine virus. Mr. Jenner found it otherwise.

In this patient to whom it was immediately transferred, a local pnstule only was excited; but in a subsequent one, the taint appeared, and an eruption of about 300 variolous pustules took place.

That matter taken from such a pustule was not to be depended on as genuine, I before expressed an apprehension (p. 367), when animadverting on a passage quoted by Dr. Cappe.

The present case has afforded an additional proof, of the antivariolous power of the Cow-pox. While the husband laboured under the small-pox, and had a crop of 300 pustules, his wife had the Cow-pox, produced by pure vaccine matter; and, though she slept with her husband the whole time, she escaped infection.

Mr. Henry Jenner has also distinguished himself by his humane exertions; and inoculated a considerable number of the poor *gratis*. These splendid examples have been followed by many of the clergy, the medical profession, and others.

The Rev. Mr. Ferryman inoculated 50 at Oakley, and 300 at Woburn; with the greatest success. The Rev. Mr. Close, of Hordle, near Lymington, has also inoculated a very considerable number in that neighbourhood.

When the practice is conducted on such an extensive scale, and the inoculator sometimes cannot see the person whom he has inoculated, a second time, errors must occur; and reports of failures must be expected. If, however, we may judge of the cases at a distance, by those which take place in our own

vicinity, whatever blame may be imputed to the practitioner, none can justly be imputed to the practice.

Of this I shall adduce an example. It is well known, that innumerable false reports, concerning this subject, are circulated with great industry; and it cannot escape the most superficial observer, that no persons are so indefatigable in propagating such reports, as those who are interested in the suppression of the Cow-pox.

In making this remark, I can scarcely be supposed to cast the least reflection on those professional men, who, instead of perverting, only wish to ascertain the truth, and instead of disturbing the minds of timorous mothers with vain alarms, either institute enquiries themselves, or recommend that they should be instituted by others, whom they suppose, from their experience, to be better qualified for the task.

Among the various rumours which have lately gone forth, and excited doubts in the minds of the most respectable persons, no one has been spread with more confidence, or gained a greater number of converts, than that respecting a family in the neighbourhood of Exeter 'Change. I was therefore induced to investigate the truth of those assertions.

I was informed that three children in the family alluded to, had been inoculated for the Cow-pox, and after proceeding regularly through that disease,

had caught the small-pox. The mother of the children, a very sensible woman, stated the particulars in a very accurate manner, and with great candour.

By her statement it appeared, that the gentleman who inoculated the children, confesses he had never inoculated any one with Cow-pock matter before: and it is worthy of observation, that these failures commonly occur in the practice of those, who have had little or no experience in this kind of inoculation.

The children were all inoculated by means of an incision; which is stated to have been very long, and very deep. These incisions are said to have been very much inflamed on the third day; which induced the medical gentleman to pronounce them all infected.

In one of the patients, no pustule, or elevation of any kind, took place; in another, there was a very small pimple, which did not maturate; and in the third, a very large pustule, depressed in the centre, and filled with matter which was rather opaque.

About two months after inoculation, the two first, in whom no pustule appeared, sickened with the natural small-pox. The other was sent into the country six weeks before; while the pustule was on his arm. By some accident it broke; and the arm continued discharging a long time, before it healed.

This child was brought from the country, and exposed to the infection of a child, who had caught the small-pox from the other two; but he resisted that infection. It is proper to remark, that the lancets were charged with a considerable quantity of *thick yellow matter*; which renders it probable, that it was taken at a late period of the disease, and consequently was the more likely to fail.

It deserves also to be mentioned, that Dr. Croft, and a considerable number of other respectable medical men, residing in London, had called at the house, in order to scrutinize the cases, almost all of whom were confident, that in two of them the Cow-pox had failed. A few gentlemen from the country, who seemed to be totally unacquainted with the subject, appeared to entertain doubts.

When all the circumstances of these cases are well weighed, it must be acknowledged by every unprejudiced person, that instead of furnishing an argument against the efficacy of vaccine inoculation, they afford the strongest, and most incontestible argument in its favour.

An inveterate foe to this practice, who signs Verax, but has not yet proved his title to that signature, pretends that certain instances occurred at Maldon, in which the small-pox supervened the Cow-pox. It may be said, and with reason, that such an unauthenticated assertion hardly merits notice. Waving,

however, that objection, I shall state the substance of different letters from that place which I have had an opportunity of perusing.

By these it appears, that in one instance where the Cow-pox is supposed to have taken place, the patient was inoculated with variolous matter, but resisted infection. In a subsequent inoculation, the matter was inserted deep; which produced an abscess, and some pustules on the arm. This can only be considered as a local affection.

In the practice of another gentleman at the same place, the pustules, in three different patients, proved abortive. The arms healed prematurely; and the patients, when inoculated with variolous matter, had the small-pox, as might well be expected.

My friend, Mr. Whateley, whose accuracy of observation is well known, has communicated to me two cases, in which persons who had undergone the small-pox some years before, proved susceptible of the Cow-pox.

The arms of both patients shewed a slight inflammation in two or three days; which gradually increased for nine days; having all the genuine marks of the true Cow-pock. In one case, the inflammation was more violent and extensive than in any case which Mr. Whateley had seen, of those who had not previously had the small-pox. It was of the erysi-

pelatous kind; and extended nearly a hand's breadth round the part in which the incision was made.

"It had not the areolous appearance, usually met with in the Cow-pock; but, in two places, there were red lines, of the breadth of a finger, in the course of the lymphatics. On the eighth day, he complained much of pain in the axilla; which continued two or three days. At this time he was a little feverish, and indisposed; and his appetite in some degree failed. The inflammation gradually declined; and in four days had entirely subsided; leaving a hard horny scab upon the inoculated part, which did not fall off for some days.

"The arm of the other patient was inflamed to about half the extent of that beforementioned; and, like that, it had no distinct areola round it. This patient was a little indisposed about the eighth day."

It is worthy of being remarked, that in almost every instance, where inflammation runs high, the inoculation has been performed in the way of incision. I have in my possession a letter which I received from a gentleman in Wales, to whom I had sent vaccine matter; in which he informs me, that one of his patients had considerable inflammation and induration of the arm, attended with high fever, for several days. In this case, he acknowledges, the incision was made rather deep. Fortunately, this is not likely to take place in future, as the matter is now

generally conveyed on glass, and may be inserted by a simple puncture.

Previous to a detail of cases that have fallen under my own observation, I shall insert a few letters, or extracts of letters, received from different correspondents, relative to the subject in contemplation.

Having prevailed on my relation, Mr. Combe, of Wincanton, to have his child inoculated with the Cow-pox, I some time after received information of its having succeeded, from Mr. Perfect, the surgeon who performed the inoculation.

His words are "The operation completely succeeded, as far as the local inflammation and pustules may be so considered; but I can hardly say there was any sickening or fever produced, during the whole process."

I also sent matter to two other relations in the country, for inoculating their children. One of them, Mr. Dyne of Bruton, informed me, that his child's arm began to inflame on the third day. This gradually increased till the tenth; when it was inflamed from the shoulder to the elbow. A slight fever took place; which continued about two days. On the eleventh day, the pustule began to turn brown; and from that time the child has been perfectly well. From the same matter, others were inoculated in that neighbourhood; and with success.

My other relation, Mr. Bird of Sturminster, had his child likewise inoculated with Cow-pock matter. By a letter dated in April, 1800, Mrs. Bird informed me, that the arm rose well, and went through its regular course; but without the least sign of constitutional indisposition.

Mr. Rankin of East Bourn, to whom I am indebted for the description of a disease occasioned by the matter of grease, published in a former part of this treatise, has since communicated to me a statement of his practice in the Cow-pock inoculation; introducing the subject in the following manner.

"SIR,

"I should have given you an account of our success in inoculating Capt. Mowatt's child for the vaccine disease, before this time; had I not wished previously to make some farther observations on a practice, which, from its apparent beneficial tendency, merits the support of every friend to society."

Mr. Rankin then declares, that although he had not then had an opportunity of putting the patients whom he had inoculated to the test of variolous inoculation, he was so far confident of its preventive effect, from many of the most respectable medical testimonies, that he should persevere in the practice, till he knew of some authentic case, to persuade him to the contrary.

He next gives an account of the cases, in which he had tried this inoculation. These amounted, at that time, to about 30. The symptoms were so nearly the same, as those described by other practitioners, that it is unnecessary to particularize them here. A few of the patients had a slight degree of fever; but too trifling to require medical assistance; nor did the arms require any application.

Mr. J. Ring informs me, that Mr. Thomson of Rochester has been equally successful with matter which I sent him long ago. The new inoculation is now conctantly practised in the Marine Barracks, at Chatham; so that the medical gentlemen in the neighbourhood can at any time obtain a ready supply of matter.

I lately received a letter from Mrs. Bird of Sturminster, to whom I had sent matter for inoculating another child. The event was as favourable, as in the former case. In the instances before mentioned, and many others, I was so happy as to prevail on my friends to introduce the practice.

My friend, Mr. Runciman, of Woburn, prevailed on Mr. Parker, an eminent surgeon of that place, to adopt the practice, and at my solicitation, had his own children inoculated for this disease. From one of Mr. Parker's patients the Rev. Mr. Ferryman, who happened at that time to be at the Duke of Bedford's, obtained the matter, with which he inoculated

to the considerable extent that has been before mentioned.

Matter of the same species, which this gentleman carried into Sussex, also proved successful; both in his own practice, and in that of the surgeon of a noble Earl, who had before practised with various success, as is before related. This practitioner, in compliance with the humane and generous orders of his illustrious patron, has now inoculated above a thousand persons with the vaccine virus; and thus exempted them from the danger of a cruel distemper, that spares neither sex nor age.

With matter of the same stock Mr. Pearson supplied Dr. Cappe of York; and prevailed on him to try the practice. The success of that practice, and the strenuous exertions of Dr. Cappe, in promoting a general inoculation, are already recorded.

Mr. Dale of Liverpool informed me, that he was the first who introduced it into that place; where he had inoculated about 300. His example was followed by Dr. Brandreth, Dr. Gerard, and many other eminent medical men. From that quarter this benign operation must naturally spread to the ships employed in the African trade.

The following extract of a letter from the Rev. John Clinch, of Trinity in Newfoundland, to the Rev.

G. C. Jenner, will also afford satisfaction to the public.

" The threads you sent me produced the desired effect, which proved a fortunate circumstance for this harbour. After inoculating my own family, I availed myself of the opportunity, whilst the small-pox was making its ravages at St. John's, of visiting that place. Encouraged by your representation, and in order to establish the fact of the Cow-pox being an absolute preventive of small-pox, I put my nephew, Joseph Hart, to the test, by inoculating him with active variolous matter; and by exposing him to a contagious atmosphere; but without its producing in either instance, the smallest effect on the system. This single case excited the astonishment of every person within whose knowledge it came; and most of those who had not previously gone through the small-pox were eager to shield themselves against that dreadful malady by adopting the vaccine inoculation. Just before my arrival at St. John's, a woman was inoculated for the small-pox; and four days afterwards her infant at the breast with the vaccine. Both went through the respective diseases in the usual way, and perfectly distinct from each other; although the mother continued to suckle her child the whole time. Shortly after my return to this place, the small-pox was brought here in a vessel from Quebec; one of her crew died of it. Fortunately for the inhabitants of Trinity, most of them had been inoculated with the Cow-pox, and were thereby prepared to resist the

influence of the small-pox. Several of my patients attended him during his illness, but resisted the infection of his disease.

" It gives me great pleasure to say, that the Jennerian inoculation is extending itself fast over this island; but one thing I lament is, the great probability of many mistakes being made by the ignorant and inexperienced in the practice; for the people of Newfoundland are now inoculating each other, and I fear some of them may either not receive the infection at all, or by taking the virus at too late a period (a circumstance you so particularly guarded me against) create a spurious disease; and thus under an ideal security, expose themselves to variolous contagion, when, in fact, they have never had the specific preventive."

Vaccine matter, obtained from Dr. Jenner, was since that time carried to Newfoundland by Admiral Pole. This also proved successful.

It must give sincere pleasure to every benevolent mind to be informed, that the new inoculation is now established in the West Indies. With matter sent by Dr. Croft, in November last, to Mr. Rooke, that gentleman, who understands that disease well, having seen it when in England, inoculated himself and 15 negroes, on the 18th of January, 1801.

It is remarkable, that this virus, owing to its hav-

ing been kept some time, did not succeed in any of the negroes; but in his own arm it produced a perfect pustule. This enabled him to carry on the inoculation effectually; for when his dispatch came away, he had inoculated 800 negroes; and he reports, that they all went through the disease with scarcely any loss of labour. This inoculation was conducted on the estates of —— Ellis, Esq. M.P. at Montpelier, near Montego Bay.

The practice has likewise been introduced into Piedmont by Dr. Sacchi; with the most happy effect.

When I am adducing evidence, to shew how favourably this improvement in medical practice is, and ought to be received, it would be injustice to the public to withhold the following communication, from a gentleman, whose professional character is too well known, to enquire any encomium from my pen.

"Dear Sir,

"I can have no objection to my name appearing in any testimonial, which gives a decided preference to the Vaccine Inoculation. I have had much experience of it; and my approbation depends upon that experience. At the same time, I must observe, more attention must be paid than in variolous inoculation; or many *false facts* will be adduced, to discredit the new inoculation.

"I will say with you, 'Those who have had the Cow-pox are secure from the future infection of the small-pox; at the same time I must observe, that in a few instances, where there has been premature local affection, without the system being in the least influenced, and without other characteristics of the true disease, the patient has not had the Cow-pox; and is as liable to the small-pox, as if never inoculated at all.'

"The same thing happens now and then in variolous inoculation; but not so often. I mention this circumstance, to reconcile conttadictory information; and to excite attention in the practice.

"I am, &c.

"JONAS MALDEN."

"Putney, Nov. 26,
1800."

Had those abortive cases occurred in the practice of a less attentive, or less intelligent practitioner than Mr. Malden, they would have furnished a delicious treat to some despicable scribler; and have served as the lie of the day, when inserted in some venal print. Of this description are those cases, where we hear of that preventive failing in every instance, in the hands of one man, which never fails in the hands of others, who inoculated a hundred times as many; and in a place where they are inevitably exposed to the contagion of the small-pox.

The following cases are such, as to deserve being

recorded. A child of Mr. Berry, at Firle, in Sussex, was attacked with the small-pox in the natural way. Five days after the eruptions appeared, two maid-servants in the house, who had not had the disorder, were secured from it, by being inoculated for the Cow-pox. Their escape is the more remarkable, since they continued in the house, and nursed the child during the whole progress of the small-pox.

A maid-servant, now living with Mrs. Robins, of Bexwell, near Market Downham, in Norfolk, had the Cow-pox ten years ago. Some time after, the children in the family where she was, were inoculated for the small-pox, which they had in a severe manner. This girl was inoculated with them, and nursed them during the whole continuance of the disease; yet escaped infection.

I am informed by Mrs. Robins, that Mr. Wales, surgeon, of Downham, had inoculated upwards of 200 for the Cow-pox, within the last three months; and that the practice was now become general there, and in the neighbouring towns, within the last six months.

Mr. Wales had inoculated infants only a fortnight old, and persons of all ages, with uniform success. Many people in that neighbourhood had exposed their children, after vaccine inoculation, to the infection of the most malignant small-pox; and with impunity.

Mrs. Robins has never known the Cow-pox fail to prevent the small-pox. She says, Mr. Wales came to her house about two years ago, to make enquiries on this subject. Of the result of those enquiries, a very satisfactory account is given, in his letter published by Dr. Pearson.

Mrs. Robins's servant is probably the young woman to whom he alludes. He told her, she never would have the small-pox. Nevertheless she was fearful; and when two of her fellow servants were inoculated for the small-pox, she chose to submit to that operation again. She also slept with another woman, who had the small pox very severely; but escaped infection.

I have met with a considerable number of persons, who have been protected by the casual Cow-pox from the invasion of the small-pox. Of these I shall here produce a few instances.

Mr. Crocker, of Beak-street, Golden-square, had the Cow-pox about forty years ago. He then lived with Mr. Jefferies, of Charlton, in Gloucestershire. He has often been exposed to the small-pox in a variety of shapes. He is a plumber; and has soldered up coffins containing those who had died of it. He also nursed his own children, when labouring under that disease, yet has never been infected.

Mrs. Thurkle, at No. 111, Swallow-street, had

the Cow-pox thirteen or fourteen years ago. She then lived in Gloucestershire, and was under the care of Dr. Jenner. She has frequently been in houses where the small-pox was, and once nursed a child who had the disorder, without suffering the least inconvenience.

Richard Haydon, a watchman at Mr. Meux's brewhouse, had the Cow-pox twenty-five years ago, when he lived in Berkshire. He has many times been exposed to the contagion of the small-pox, and nursed his own children when they had it, ten years ago; yet never had the least symptom of that complaint. A cow-doctor told him, he would never be in danger of the small-pox. He knew an old man, whose wife was a nurse, and who used to call on her, when attending persons in the small-pox. This man had undergone the Cow-pox in his youth, which proved his safeguard.

——— Deacon, No. 4, Brooke's court, Brooke's street, Tottenham-court-road, caught the Cow-pox about sixteen years ago. Ten years after, he was inoculated for the small-pox, together with his wife and three children, by Mr. Porter. His wife and children had the disorder severely. One of the children died. In the man himself, infection did not take place. He was therefore inoculated again, with fresh matter from one of the children; and Mr. Porter said, he would take care to insert plenty of matter, in order to ensure infection, if possible. He was, how-

ever, again disappointed. The man lived and slept with his family, the whole time; but resisted infection. Another family in the same house, were inoculated at the same time; and the inoculation succeeded in them all.

——— Hutchins, now residing at No. 13, Tottenham-place, Tottenham-court-road, had the casual Cow-pox twenty years ago, when she lived at farmer Longford's, at Stratford, in Warwickshire. She afterwards went to two places where the small-pox was, in order to try whether she was susceptible of infection.

About five years after this, she was inoculated for the small-pox, together with about a hundred others, at a farm-house, to which they retired, for fear of communicating the disease to their parents. All those who were inoculated had the disease, except herself. She assisted in attending the rest, during the whole time of their illness.

Since that time, she has nursed no less than eight or nine persons in the small-pox; three of whom died from the severity of the disease; and were laid out by her; one, only a year ago. She has very often been where the disease was; but has always escaped. What stronger proof of permanent security can any man require?

I have lately seen a very accurate representation of

the Cow-pox, as it appears in the cow. This was brought from Gloucestershire by Mr. H. Jenner. The person to whom the cow belonged, had refrained from milking her, by desire of Dr. Jenner; in order that the drawing to be taken, might bear an exact resemblance to the disease, when in its natural state.

The pustules are numerous, but small; in shape similar to those in the human subject; but less transparent, on account of the thickness of the cuticle. In this instance, infection was traced from the heels of a horse.

Mr. Jenner lately saw a farrier, of the name of Burleigh, who declared he had received infection from the heels of a horse many years ago. This man, hearing that there was a very bad case of the small-pox in the place, rushed into the apartment where the sick person was; and gave a convincing proof of the confidence he had in that disease, as a preventive of the small-pox.

The following information was communicated to me by Mr. Griffiths, surgeon to the Queen's household. —Two children, whom Mr. Griffiths had inoculated with the Cow-pox, were every day sent by their mother to a house, where there were persons labouring under a malignant small-pox. In this place they passed a great part of their time, without receiving the least detriment.

Every day furnishes fresh proofs of the necessity of caution, in listening to the reports which are unfavourable to this practice. A surgeon lately consulted Dr. Jenner about a case, where the small-pox appeared on the ninth or tenth day, after vaccine inoculation. In this case, it was not difficult to account for the small-pox. The patient had been received into a house where variolous infection was, five days before the Cow-pock matter was inserted.

I come now to the last part of the task I have undertaken; which is, to state the result of my own practice. Deeply impressed with the magnitude and importance of this discovery, and of the benefits that would accrue to society from its adoption, I considered it as a duty incumbent on me, to promote it to the utmost of my power. In consequence of this opinion, I laboured to overcome the prejudices which prevailed; and not altogether without success.

Much experience has convinced me, that the prejudice of the public in general is not insurmountable; and that the prejudice of certain individuals would not be insurmountable, nor rise to such a height, were not a little of the leaven of self-interest, blended with that prejudice. The annihilation of the small-pox, is the annihilation of one of the principal branches of the medical revenue.

Having overcome the first difficulty, by prevailing on a few families to submit to the new inoculation,

having also ascertained the mildness of the disease, and its efficacy in protecting the patient from the small-pox, I resolved never to inoculate with variolous matter again, unless the vaccine fluid should prove less capable of superseding a previous infection of the small-pox.

Nor should I deem it a perfect discharge of duty, in any professional man, on an occasion like this, did he not exert every faculty of his mind, to remove the obstacles that retard the progress of this improvement; did he not explain the advantage of the practice to *all ranks of people;* did he not exhort and encourage, and *enable all ranks of people* to avail themselves of that advantage.

Impressed with these sentiments, I have held out every encouragement in my power to all persons; but especially to that order of society, of which a very great majority have hitherto tasted only the bitter fruits of inoculation. To the rich it has proved a blessing; but to the poor in general, at least in this metropolis, it has proved a bane.

Favourable as the opinion was, which I first entertained of the new practice, the success which has attended it has exceeded my most sanguine expectations. For a while, it had some difficulties to encounter, like every other innovation; but when a few in any neighbourhood were inoculated, and its mild nature was ascertained, the tide of popularity turned

in its favour; and instead of 800, which is about the number that I have now inoculated, if time and other avocations had permitted, I might have inoculated at least as many thousands.

In the populous villages of Lambeth, Walworth, Newington, Bermondsey, and Rotherhithe, and in the Borough itself, there is no vaccine institution, nor inoculation hospital; nor was this practice scarcely known to any of the labouring poor, who constitute the bulk of society every where, but there in particular.

In these parts in general, the houses and apartments are small and crowded; the streets narrow, the accommodations very scanty, the air in many places unhealthy; the people in general, from their situation in life, are ill-informed, and unable to procure good medical advice; and from a combination of these causes, the small-pox, in that district, is very fatal.

Anxious to extend the blessings of this happy discovery, to acquire and communicate all the knowledge I possibly could of the subject, to dispel the mist of prejudice which was excited by certain malignant persons, and to establish the practice on a solid foundation, I devoted every moment which I could spare, and more than I could well spare, to these important objects. This is the reason, why the present treatise has been so long delayed; and, I trust,

will plead some apology for those imperfections which it now contains.

In pursuance of this plan, I have assiduously sought for patients, whom I might inoculate with the vaccine virus; and laboured to remove every obstacle that opposed my progress. With the multitude, I have reason to believe, the expense of inoculation at home, and the trouble of having it performed at a distant place, are the principal objections to the practice: objections which, I sincerely hope, will soon be removed.

It is now unnecessary to exhibit a tabular statement of cases; or to detail those which are regular; I shall therefore confine my observations to those, which tend to some practical inference, or serve to confirm, in a striking degree, the principal axioms laid down by the great advocates for this invention.

Having heard of Dr. Jenner's discovery from a very respectable quarter, I mentioned the circumstance, and the authority on which the credibility of the fact rested, to several of my relations and other particular friends. The first to whom I made it known was Mr. Stones, of Chandos-street, Covent Garden; who was so well convinced of the great probability of success, from the testimonies which I stated, that he instantly declared, he would allow the experiment to be tried on a child of his own, when I could procure matter.

To this declaration he faithfully adhered, as far as reason would justify. When matter was obtained, the child was rather indisposed. As soon, however, as her health would permit, she was subjected to the experiment of inoculation with the vaccine fluid; and appeared to suffer very little from that disease; but her bowels, which were naturally weak, were disordered by some improper articles of food, recommended by a gentleman who did not know her constitution.

At first her parents did not wish to give her, what they conceived to be unnecessary pain, by submitting her to the test of inoculation for the small-pox; but, at the expiration of a year, they expressed a desire to have her inoculated with variolous matter also, for the sake of satisfaction, which was readily complied with. Accordingly, recent variolous matter was inserted into both arms; by which a slight erysipelatous inflammation only was excited; and it appeared evident, that the patient was secure from the small-pox.

A child of Mr. Butler, then residing at Charing-cross, now in Wood-street, Cheapside, was inoculated about the same time with vaccine, and afterwards with variolous matter; and with the same success.

A child of Mr. Green, then of Adam-street, now of the Cannon Coffee-house, Charing-cross, was also

successively put to the test of both inoculations; and afforded another instance of immunity from the small-pox, obtained by the Cow-pox.

A child of Mrs. Jones, then living at No. 19, Swallow-street, was also inoculated with the vaccine disease, and afterwards submitted to the test of variolous inoculation. He has also, since that time, been frequently exposed to the infection of the small-pox in the natural way; and, as well as many others, given proofs sufficient to convince the most incredulous, that he is insusceptible of the small-pox. These facts can be attested by several of her friends and neighbours, if requisite.

A child of Mr. Crosier, of Middleton's Buildings, Queen Ann-street, East, was inoculated with Cow-pock matter, which took effect; and afterwards with the variolous matter, in vain. This child has often been exposed to the infection of the small-pox.

A child of Mr. Drummond, of Church-street, Soho, after having the Cow-pox, was inoculated with the matter of small-pox; but resisted that infection.

A child of Mr. Rickards, of Piccadilly, who had undergone the vaccine disease, was also subjected to the variolous test: but no symptom of the small-pox appeared. Mr. Rickards was so well satisfied with the success of this case, that he has since had another child inoculated with the vaccine disease.

The same experiment was tried on the child of Mr. Brattle, of King-street, Golden-square, and of Mr. Dawson, of Upper Cleveland-street, with the same happy event.

A child of Mr. Dawes, the fruiterer, in Oxford-street, after having the Cow-pox, was inoculated with fresh variolous matter in both arms; and has often been in the same apartments with persons labouring under the small pox. She was once exposed to the infection of that disease for a whole day, in the small cabin of a Margate hoy. Mr. Dawes has since had another child inoculated with the Cow-pox.

The next patients whom I inoculated with vaccine virus, were exposed to the infection of the confluent small-pox four days, previous to inoculation; and, whether the virus was contaminated previous to my receiving it, as had been the case on a former occasion, or whether the variolous contagion, to which they were exposed, produced that effect, each of them had several varioliform pustules. One, a girl eleven years of age, was under the necessity of taking a long walk, in a very hot day; and was very feverish for a day or two. The other was scarcely indisposed. The subjects of these cases now live at No. 59, Swallow-street.

In August, 1799, I inoculated the child of Mrs. Rees, then residing with her sister, Mrs. Jones, whose

name is mentioned in a preceding case, but now at No. 6, Portland-street, St. George's in the East.

This child was often carried to places where the small-pox was; but all attempts to infect him proved abortive.

Unavoidable absence from home, repeatedly interrupted the course of my inoculation, during that summer: but from September in that year, till the present time, I have constantly had vaccine patients under my care.

September 9, 1799, I inoculated a child of Mr. Webb, at the Griffin, Half-moon-street, and two of his servants, with matter taken from the child of Mrs. Rees, beforementioned. The child was not a month old, and the mother, venturing to go down stairs too soon, had fractured her leg the day before.

The time, however, for inoculation having been previously fixed, the small-pox raging in every quarter, and the period for taking matter then expiring, it was judged proper to seize the opportunity of performing the operation; especially as the servants were hourly exposed to the danger of infection, in the public line, and the mother of the child bore her misfortune with great fortitude, and tranquillity of mind.

The infant was slightly indisposed, for a few days;

but it appeared to proceed from the bowels, and to be occasioned by the milk. The maid-servant shewed a trifling degree of constitutional affection; which seemed to be symptomatic, and owing to hard labour, which in some measure aggravated the inflammation of the arm.

The other patient, a young man, was so imprudent as to leave off a waistcoat; and, a cold wind coming on, he had febrile symptoms, which increased for a day or two; but not so as to confine him, or hinder him from his work.

Whether the virus with which I now inoculated, proceeded from a more uncontaminated source, or whether it had refined itself, I know not; but these and the following cases were more free from pustulous eruptions, than the preceding; although no one had been attended with any that were of consequence, unless where a variolous taint might be suspected.

With the matter produced in the last family, I inoculated three children of Mr. Ballard, then at No. 70, Titchfield-street, now at No. 35, Cleveland-street, Fitzroy-square; who went through the process without any material inconvenience.

With vaccine fluid taken from one of these, I inoculated two children and a niece of Major Eyre, of Brompton; and with the same good success. In these cases, the measles supervened; which deter-

mined a question put by Dr. Pearson, whether the Cow-pox is a preventive of that disease? Numerous instances besides these, have since occurred.

Having at that time nine patients under my care, whose cases were free from eruptions, I flattered myself I had at length procured genuine vaccine virus, but one out of two children, whom I next inoculated, had four or five maturating pustules. I had, therefore no reason to regret, that I had sent to Dr. Jenner, requesting the favour of some of his Cow-pox matter.

With this I inoculated a child of Henry Hemsley, Esq. of Hans-place, and one of Mr. Howard, in Maddox-street. In both cases, inoculation failed; but recent matter was successful. In Mr. Howard's child, when the plaster was first taken off, at the end of three or four days, evident signs of inflammation, and matter contained in the incision, seemed to me to indicate, that the infection had succeeded; but on inspecting the part again two days after, these appearances had entirely vanished. It is one inconvenience of an incision, that it may prove fallacious, with regard to infection having taken place; another, that when infection actually takes place, it exasperates the disease.

The patient in whom the variolous pustules took place, was a child of Mr. Sayre, Old Bond-street. Previous to this, I began to hope, that the vaccine

virus which was in use, had undergone a perfect depuration; but this convinced me of my error.

I therefore wrote again to Dr. Jenner, entreating a fresh supply, which I soon received by favour of his friend Mr. Paytherus. In the patient whom I inoculated with this, only one pustule was excited; which, by some accident was ruptured. Being thus disappointed of taking matter, I was under the necessity of troubling Mr. Paytherus again.

This was in November 1799; since which time, I have been so fortunate as to preserve this valuable stock; and have been able to supply practitioners in most parts of the world, from the fertile store.

November 14, 1799, I inoculated a child of Mr. Webster, at No. 2, Little Vine-street, with the matter which I received from Mr. Paytherus. Infection took place; and I was enabled to continue the practice. In order to ascertain the comparative purity of the different sorts of reputed vaccine matter, then in use, I disseminated this species as much as possible; and it is only justice to its merit to declare, that, notwithstanding it has extended its influence far and wide, not a single complaint of its producing the least ill effect, or a disease resembling the small-pox, has ever reached me.

One instance occurred in my own practice, where varioliform pustules could not be accounted for.

This was in one of the children inoculated from the foregoing. But it must be recollected, that the variolous miasmata are invisible agents; and almost continually float in the atmosphere of London.

Mrs. Webster, and a lady whose infant was inoculated from that of the former, assured me, that their children shewed evident signs of this affection having taken place, on the third day. They were manifest on the fourth, when I called; especially a drowsiness, which may be considered as the most universal symptom of the disease. Both children slept almost the whole of the third day; a circumstance which had never happened to either of them before; and they were at that time about three months old.

The child of Mr. Tinkler, in Cranbourn-street, after proceeding regularly through the disease till the eleventh day, sickened in the same manner as patients in the small-pox commonly do. As this was, at that time, no unfrequent occurrence, in those who were inoculated with supposed vaccine matter, I had no suspicion of its being an anomalous appearance; but subsequent experience warrants me to conclude, that it was not occasioned by the Cow-pox.

Passing by those cases, in which nothing singular, or worthy of notice, was observed, I shall next record another case, which affords a striking proof of the efficacy of the practice. A child of William Dyne, Esq. in Serjeant's Inn, was inoculated in De-

cember 1799, and had the Cow-pox in the usual mild way. Her parents at first declined having her inoculated with the small-pox; but at the end of six months, expressed a wish that she might be submitted to that test. Accordingly, she was inoculated with recent variolous matter; which was inserted in both arms; freely, but without effect.

About the same time I was sent for to see a son of Mr. Boone, in Swallow-street, in whom the confluent small-pox had appeared the preceding day. I prevailed on the parents to have a little girl, three years of age, inoculated for the Cow-pox. This antidote proved successful; notwithstanding her brother was covered with a virulent kind of small-pox from head to foot, emitting a noisome stench; notwithstanding she was unavoidably exposed to the full force of infection, night and day, during the whole course of the disease.

The two children ate together, drank together, and slept together; forming a perfect contrast; and exhibiting an admirable specimen of the advantages to be expected from the new practice. While one lay suffering the torments of a cruel distemper, and was the object of horror to his afflicted parents, the other continued free from disease; unless a pleasing slumber, of two hours, can be called by that name.

Several children, who had been inoculated with the Cow-pox, one of whom was that of Mr. Rickards,

who had also been inoculated for the small-pox, and resisted that infection, were carried to this house, and put to the proof; but escaped infection. It will not be thought surprising, that Mr. Boone has since had another child inoculated for the Cow-pox.

On the 14th of January, 1800, I inoculated two daughters of —— Styles, No. 63, King-street, Golden-square. The vaccine affection bore its usual benign character. The mother of these children had formerly lived in the service of Mr. Wathen; who has always shewn the utmost compassion to her distressed family; and had her son, who is blind, educated in music under an able master.

Hearing that his old servant was dangerously ill, he visited her; and being informed that two of her daughters had been inoculated for the Cow-pox, he requested me to inoculate them for the small-pox, in his presence, after the expiration of three months.

With this request I readily complied. When the proposed time had elapsed, I inoculated both patients in both arms, in the presence of Mr. Wathen; repeatedly inserting a large quantity of matter, immediately from a subject labouring under the confluent small-pox.

While the operations were performed, they stood close by the miserable object from whom the matter was taken; inhaling the fetid effluvia from one, who,

in six and thirty hours from that time, fell a victim to the disorder.

An infant had been exposed to the infection of this patient till the eighth day; when Mr. Newby was called in. He applied to me for some Cow-pox matter; which I had before prevailed on him to try, when he applied for small-pox matter; at the same time shewing him the case which occurred in the family of Mr. Boone. In this second instance, as well as in the first, it gave him perfect satisfaction; and not without reason; so that the vaccine inoculation, at present, has not a more zealous advocate than Mr. Newby; nor one who has put its efficacy to more severe trials.

The infant whom he inoculated in this case, although it was inhaling variolous miasmata during the whole time of inoculation, and frequently lay in the same cradle, in contact with the child who was covered with the small-pox, had the Cow-pox in the most unequivocal manner; and so little constitutional affection, as to leave no doubt of his having been in a great measure protected, by that disease, from the power of the small-pox. About half a dozen small variolous pustules appeared; either owing to his having breathed a variolated atmosphere so long; or to actual contact with variolous matter. This case was seen by Dr. Jenner, and Dr. Pearson.

Since that time, Mr. Newby has inoculated several

children, who had been exposed to the small-pox four or five days; and with invariable success. Mr. Jordan in the Borough has inoculated those who had been exposed in a like manner; and with the like fortunate event.

About the same time with the child of Mr. Rickards, I inoculated two children of —— Dawson, one of his servants, first with the Cow-pox; and afterwards put them to the test of inoculation with variolous matter; but no infection took place.

October 18, 1799, I inoculated a child of Mr. Scarfe, in Maddox-street, with vaccine matter. About a fortnight after, I inoculated another of his children; and in about the same space of time, a third. These, and a vast number of other cases which have fallen under my observation, serve to confirm the opinion of Dr. Jenner, that the Cow-pox is not infectious but in a palpable form. When I expressed a doubt of that opinion, I was misled by fallacious appearances; in consequence of variolous matter having been given to myself and others, in some instances, instead of that of the Cow-pox.

In November, 1799, I inoculated with vaccine matter, two children of Mr. Cowcher, in South Moulton-street, three of Mr. Brightwell, in Upper Cleveland-street, and three at No. 2, in Little Vine-street; besides several others, of whom no accurate account was kept; and, a short time after, those of

Mr. Blane, in Brewer-street, Mr. Hagley, in Swallow-street, Mr. Farmer, Silversmith, in Oxford-street, Mr. Hebner, in Maddox-street, Mr. Boyd, of the Barrack-Office, Mr. Lansdown, and Mr. Schroder, of Upper Cleveland-street, Mr. Wiggins, of Brick-street, Piccadilly, Mr. Richards, Little Windmill-street, and a servant of Dr. Fryer. In no one of these cases, was there the least sign of a pustulous eruption; or a single alarming symptom observed.

Among those whom I inoculated for the vaccine disease, in the beginning of the year 1800, was a child of Mr. Bourne, of St. James's-street. A sister of Mrs. Bourne, in whose house the child was at that time, having an insuperable prejudice against inoculation, I was desired to conceal it from her, till it was over; which was easily done, as there was neither any eruption, or sensible indisposition, to betray the secret.

In the month of February, 1800, I inoculated the child of Mr. Butcher, in Heddon-street, with the vaccine preventive; and the disorder proceeded through its regular course. Having then been informed, that most of the principal inoculators had discontinued inoculating those who had undergone the Cow-pox, with variolous matter, from a conviction that it was no longer necessary; I was happy in having it in my power, to spend that portion of my time which had been employed in putting my vaccine patient to the test, in augmenting their number.

Instead, therefore, of adding ten to my list of vaccine cases, I was now enabled to add twenty. Instead of trying my patients by the test of variolous inoculation, I tried them by the test of the natural contagion of the small-pox; as I had before done in several cases. To this test the last mentioned child was exposed by the mother; who carried it several days following to a house in Hanover-street, where another child laboured under a heavy burden of the small-pox; and exerted every effort to produce infection, but to no purpose.

A few days after, I inoculated the child of —— Butler, in Heddon-street. The infection succeeded in one arm; and failed in the other. On the tenth day, I took matter from the pustule which was excited, and re-inoculated the other arm; in order to ascertain whether the habit still continued susceptible of infection. A pustule rose in the usual space of time, about half the size of the first, but perfect in every other respect. This experiment has been frequently repeated, by myself and others; with various effects. One point, however, is clearly ascertained; namely, that susceptibility of fresh infection diminishes in proportion to the progress which the first has made.

In February, 1800, I inoculated a child of Mr. Shepherd, in Phœnix-yard, Oxford-street, with Cow-pock matter. The day after its insertion, the measles appeared. He had been troubled with a cough, but it was much abated; and the small-pox beginning to

prevail, it was not thought prudent to delay the operation. The measles ran their regular course, and were immediately succeeded by the Cow-pox, in its usual form.

In April, 1800, I inoculated two children of Mr. Pugh, in Upper Cleveland-street; one of whom had the genuine vaccine pustule; the other who had before been inoculated for the small pox, but ineffectually, was also ineffectually inoculated for the Cow-pox. The operation was repeated; but in vain; so that it is probable, he had been rendered insusceptible of infection by the natural small pox; which, there is reason to believe, takes place in many instances, without being observed. At that period, I made two punctures in each arm, each time of inoculation; so that by the repetition, the whole number was eight. The effect was, a spurious pustule or two; totally unlike the genuine disease.

About the same time, I inoculated a child of a wet nurse, who was suckling the child of Mr. Bourne, whose case is before mentioned. Anxious to propagate the practice, and to render it popular; anxious also to acquire all the knowledge I possibly could, of the nature and treatment of a disease, on which I proposed to write, I embraced every opportunity of recommending this inoculation; and spared no pains, in persuading the parents of children who had not had the small-pox, to comply with my advice.

This child was at nurse, in York-street, Newington-causeway; and the woman who had the care of her, neglecting to bring her to me, I went to that place, and inoculated the infant. Observing a number of poor people in the neighbourhood, I determined to inform them of the advantages of this new practice, to which they were perfect strangers; and, by various arguments, especially by an offer of gratuitous inoculation at their own houses, found it not very difficult to prevail.

Every proselyte which I gained, facilitated the conversion of others; and my efforts were powerfully seconded, by the encomiums lavished on this practice, by those who experienced its good effects; but, above all, by the benign appearance of the disease. Hence, instead of seeking for subjects to be inoculated, in a short time, I had numerous applications; and was earnestly solicited to diffuse the benefits of this happy discovery, in every direction.

Could I have employed my whole time in the prosecution of this pleasing task, by which so much good may be done, with so little trouble, and at so little expense, the number which I might have inoculated is incalculable. But many impediments lay in my way. The places were distant from my residence, and from each other; and, in addition to unavoidable avocations, a considerable part of the day was occupied in explaining the nature of the practice

to those who requested information, and collecting matter to supply the increasing demand.

April 24, I inoculated a child of Capt. Cormack, in Grosvenor-place, with the vaccine fluid; and some time after the termination of the disease, with variolous matter, which produced not the least effect.

About the same period, I inoculated a child of Mrs. Foster, No. 45, Carnaby-street. Five months after, a young child, whom she intended to have inoculated, was attacked with the natural small-pox, which proved fatal. The other child was exposed to the infection the whole time; but escaped. In January last, a child in the same house was seized with the confluent small-pox; and sunk under the severity of the disease. The child who had before had the Cow-pox, associated with it continually; without the least ill effect. Another instance of the small-pox occurred in the house, to which he was constantly exposed, with impunity.

May 15th, I inoculated three children of Mr. Hart, in Marshall-street, Carnaby Market, with vaccine virus; and they went regularly through the disease. The small-pox had been in the house three days; but the Cow-pox secured them from its contagion.

About the same time, two of the children of Mr. Pritchard, at No. 12, Norris-street, Haymarket, were

seized with the small-pox. The next day I inoculated another of his children with the Cow pox; this completely shielded him from the variolated atmosphere, with which he was surrounded.

It was about the same time, that I received from Dr. Jenner vaccine matter taken by Mr. Tanner from a dairy maid, who caught the disorder by milking a cow, which Mr. Tanner had inoculated from the heel of a horse. This proved equally efficacious with the matter which I had before employed; and produced exactly the same kind of pustule.

About the middle of May, the small-pox broke out in Pollen-street, Hanover-square. I prevailed on the inhabitants to have their children inoculated with the Cow-pox; and thus prevented the dangerous epidemic from spreading through the neighbourhood.

About the same time I inoculated a child and a nurse-child of Mrs. Thurkle, No. 111, Swallow-street. This woman is a native of Berkely; and having experienced the benefit of the Cow-pox, which has been her safeguard from the small-pox many years, wished her own infant and the other which was under her care, to enjoy the same advantage.

May 26, 1800, I inoculated the child of Mr. Hardy, No. 45, Peter-street, Westminster, with the vaccine fluid. This was the case, in which there was

a perfect areola, notwithstanding the coexistence of the measles.

May 27th. I inoculated a child of Mrs. Stevens, of King-street, in the Mint, and produced the vaccine affection. This child has often played with others who had the small-pox, yet never betrayed the least symptom of that disease. The success which Mrs. Stevens has met with, in securing her child from a dire affliction, and her favourable report of the case, have stimulated others to follow her example.

May 28th, I inoculated a daughter of Mrs. Mitchell, with matter taken from her servant. This stock was the produce of Mr. Tanner; and proved, both in my own hands, and in those of Dr. Jenner, equally efficacious with that, which is the result of the casual disease.

May 31st, I inoculated four children of Mrs. Terry, at Newington-causeway. They now live in York-street, St. George's Market; and have associated for weeks together with those labouring under the small-pox; without incurring the least inconvenience from such exposure.

June 3d, 1800, I inoculated a child of Mr. Huddlestone, No. 5, Barret's-court, Oxford-street. Since the child had the Cow-pox, its mother has carried it seven or eight times to places where the small-pox was; but without the least effect. The

children of Mrs. Horn and Mrs. Blake, at No. 20, in the same court, whom I also inoculated with the Cow-pox, have been exposed in a similar manner; and that of Mrs. Blake was for a long time with a child who died of the small-pox, without sustaining the least injury.

A daughter of Mrs. Yates, at No. 18, Kingsgate-street, Holborn, was inoculated by me, on the 10th of June, 1800, with matter which Dr. Marshall had taken from his own child, in Gloucestershire. This child was inoculated from a dairy-maid. The dairy-maid had caught the distemper from the cow, which the farmer's son had infected from the heels of a horse. The inoculation with this matter proved successful. In January, 1801, the girl whom I had inoculated, nursed a child who had the small-pox to a very violent degree; but the vaccine disease, which she had undergone, guarded her from all infection.

June 17th, I inoculated seven children of Mr. Jackman, of Lock's-row, Walworth. They all had the disease in the mildest manner imaginable; to the inexpressible consolation of their parents; who had lived in continual dread of the misery which the small-pox would occasion, whenever it should take place in such a family.

By this sevenfold specimen of a mild, safe, and effectual substitute, for a malady never to be contemplated without horror, the vaccine inoculation

made a rapid progress at Walworth; in spite of the opposition of certain persons, who had an interest in opposing it; and their artful insinuations, to prevent the inhabitants from adopting the practice.

June 23d, I inoculated a child of Mr. Sherrard, of Morton-street, Newington-causeway. This case, as well as every other in that neighbourhood, amounting to some hundreds, was so mild, that I only mentioned it, because Mr. Sherrard furnished me with additional evidence in favour of the vaccine inoculation. A friend of his had the Cow-pox in his youth, and it has always averted the variolous contagion, to which he has been much exposed.

June 29th, the child of Mr. Giles, in Carnaby-market, was inoculated with vaccine matter. I had endeavoured to prevail on the parents to consent to this operation for some time; but it was delayed, in consequence of idle reports which were propagated, till the small-pox broke out in the family; which proved fatal to one infant, about eight and forty hours from its invasion. The other, though all along exposed to variolous infection, in hot weather, and a very small apartment, was preserved by the Cow-pox from that distemper.

July 8th, I inoculated a child of Mr. Leighton, Surgeon, in Welbeck-street, with the vaccine virus. Though of a delicate constitution, he passed through the disease without a single alarming symptom; and

has since given proof, that he is rendered insusceptible of the small-pox.

July 11th, I inoculated two children of Mr. Davis, No. 29, Tottenham-court-road; and so favourable was the appearance of the pustules produced, as to excite the jealousy of a great inoculator for the small-pox, who has been indefatigable in spreading reports against the practice; and could not help shewing his resentment on this occasion, by bruising one of the pustules with his thumb. He was determined to give his enemy no quarter, but crush him in the shell.

July 13th, I inoculated two children of Mrs. Jones, at No. 6, Lock's-place, Walworth. Nothing worth mentioning occured in these cases; but I deem one article of intelligence, which I received from Mrs. Jones, worth mentioning; since it may serve to put the public on their guard. From her I learnt, that a medical man went about from house to house, depreciating the practice; and assuring the parents of those whom I had inoculated, that their children would all be liable to have the small-pox. This confirms the opinion of Dr. Stokes at Worcester, as expressed in the Medical Journal, that "the most formidable class of opponents, which the new inoculation has to encounter, are those who calculate their future income by the quantum of expected disease."

July 18th, I inoculated another child of Mr. Da-

vis, whom I deferred inoculating a few days, on account of a considerable eruption on the chin, attended with ulceration, and swellings of the cervical glands, in consequence of his pulling off a wart, and continuing to irritate the part with his nails. Had this occurred a week or two later, what exultation it would have afforded to the enemies of the practice!

Twice I have narrowly escaped a greater danger. One person who lives beyond the Tower, intended bringing her child to be inoculated in a week; she proposed to defer it till then, on account of a cough under which the child laboured. The cough proved fatal within that time. Another child was brought from a neighbouring village, where he was at nurse, to be inoculated. Being informed that he had excoriations behind the ears, I declined inoculating him. After he had left town, the nurse neglected applying regularly the dressings which were directed; and a mortification of the parts affected took place. This, had I not happened to be informed of the complaint, and prevented from inserting the virus, would have been laid to the charge of the Cow-pox.

I cannot let slip the present opportunity of advising medical men, not to neglect all precaution, even in the practice of this mild disease; by which, as well as by the small-pox, wounds in any part of the body are apt to become inflamed; and their edges to assume a pustulous form.

July 21st, I inoculated a child of Mr. Coffin, at No. 103, Tottenham-court-road. The small-pox was then in the house. The vaccine disease took place in the usual mild way; and matter was taken from the pustules for other inoculations, by Mr. Pearson as well as by myself; which proved perfectly successful. At the expiration of a month from the time of inserting the vaccine virus, the child was again brought to me. It had then a fine variolous pustule on the leg; but not the least indisposition.

July 21st, —— Butler, No. 42, Marybone-lane, came to me, to be inoculated for the Cow-pox, in consequence of the small-pox having broken out in the garret of a house, behind which his own habitation lay. He told me, he had no reason to apprehend that he was infected; as he only went through the passage. Unfortunately, however, he had been blasted by the breath of this deadly poison; but from what source it is impossible to determine, since, at that time, in consequence of the excessive heat, the small-pox raged in every quarter. In this unhappy man, it shewed itself on the seventh day; so that even the insertion of variolous matter could not have warded off the impending blow.

Out of a considerable number of cases, where I have inoculated persons who had received previous infection, this is the only one that has been attended with an unfavourable termination. Nevertheless, I shall not presume to decide, under what circum-

stances vaccine inoculation may be preferable, in all cases: this is a task too arduous for me to undertake.

The following day, three children of Mr. Nicholson, who lodged in the apartment next underneath that in which the small-pox was, in the house above mentioned, came to me to be inoculated for the vaccine disease; and the event of these cases, where it was much less to be expected, was extremely favourable. In the eldest, who had been more exposed than the other two, the small-pox appeared on the third day, but was remarkably mild. I am not so partial to the Cow-pox, as to suppose it had any share in this: but its salutary effects were evident in the other two children; who, though surrounded with its contagion, escaped the small-pox.

July 29th, a child of Mr. Mallum, of No. 1, New Road, Hans-place, Brompton, was brought to me to be inoculated for the Cow-pox. Another of his children had then laboured under the small-pox seven days. This child died on the eleventh day. The other, in whom vaccine inoculation succeeded, although he was kept in the same apartment, escaped variolous infection.

A child of Mr. Saunderson, who lodged in the same house, was inoculated with vaccine matter on the same day. This child used to play with that who had the small-pox; yet no ill consequence en-

sued. These were two, out of a considerable number, who came to be inoculated gratis; and whom it was impossible, on account of the distance of their residences, and the different directions in which they lay, for me to attend at their own houses. Had I been apprised of the danger to which they were exposed, I should have cautioned their parents against such temerity.

About the same time I inoculated a child of Mr. Cook, and one of Mr. Shepherd, at No. 11, York-street, Hans-place. The small-pox was at this time in the house, and epidemic in the whole neighbourhood; yet they were both rescued from the rage of that pestilence.

August 6th, I inoculated a child of Mr. Austin, who now lives at No. 29, Grafton-street, Soho. The confluent small-pox had been in the family five days, when the child was born. There were only two small apartments, with a free communication between them; the same nurse attending the mother and both children; so that, with regard to the escaping from infection, unless by means of the Cow-pox, there was but a forlorn hope.

In this dilemma, I recommended vaccine inoculation; which was instantly performed; and crowned with complete success.

A child of Mr. Lyncham, No. 54, Great Mary-

bone-street, whom I had inoculated for the Cow-pox three months before, was carried to the house, and suffered to lie in the cradle with the child who was covered with the small-pox, three quarters of an hour; without receiving the least injury.

August 14th, I inoculated three children of Mr. Bembridge, No. 2, London-road, with the Cow-pox. Before this disease had attained its height, the scarlet fever appeared in the family, and attacked these children, as well as others who had undergone the small-pox. The Cow-pox neither seemed to increase or diminish the violence of the disease. They all recovered.

About the same period, I inoculated a great number of persons in the Borough; all of whom recovered; yet some trivial inconveniences happened, partly from the distance of my residence, and my inability to give the attendance which I wished to give, and partly from the ignorance and misconduct of those who had the care of the patients.

In one instance, an abscess took place in the arm; owing to a tight ligature with which a mother confined a dressing on the arm of her child. In two other cases, the arms were suffered to continue in a state of ulceration, some weeks after the mother informed me they were well. In one of those cases, as well as in others which I have seen, pustulous eruptions, long after the termination of vaccine disease,

were the consequence. These, when ruptured by accident, left sores behind. This is no more than what frequently happens, when matter has been absorbed into the habit, from any other sore that is neglected; occasioning purulent eruptions, abscesses, ulcerations, tinea capitis, and the whole tribe of scrofulous complaints. The child here alluded to had long been scrofulous.

August 20th, I inoculated Mr. Jackman, No. 8, Smith's-place, St. George's Fields, aged 72, and four of his great grandchildren, with the Cow-pox; and from one of the children I inoculated Mrs. Jackman, sister-in-law of Mr. Jackman, aged 84; who lives in Morton-court, Newington-causeway. These two persons had lately come from the neighbourhood of Guildford, to spend the remainder of their days with their relations in the neighbourhood of London. The inoculation, in all these cases, was attended with a fortunate issue.

August 23d, I inoculated several children in Falstaffe-yard, Kent-street-road, with the Cow-pox virus. They have since been much exposed to variolous infection; a family, which came to live there, labouring under that disease. A child of Mrs. Jennings, whom I had inoculated for the Cow-pox, associated with two of those who were covered with the small pox; and slept with one of them the whole night; yet continued free rom all contagion.

August 24th, I inoculated a child of Mrs. Leffar, of Derby-court, Piccadilly; and on the 6th of September, another child of Mrs. Leffar, and one of Mrs. Kidd, of the same place, with the vaccine fluid. These children have often been exposed to the small-pox, and resisted infection.

August 26th, I inoculated a child of Mrs. Drake, No. 90, Mount-street, for the Cow-pox. The person who had recommended it to Mrs. Drake, was a laundress; who, when her child had been inoculated by me with the Cow-pox, and passed through the disease, wrapped it up in sheets which were just taken off from the bed of a patient labouring under the confluent small-pox; and left it in that state for some hours, without producing infection. Mrs. Drake has put her own child to the same proof; and with the same success.

August 29th, I inoculated a young man who lived with Mr. Pope, a Butcher, in Weymouth-street. In consequence of an immoderate exertion of his arms, and a very liberal indulgence in animal food, he was one day troubled with a headach, and the pustule was surrounded with a greater degree of inflammation and induration than common. A cool bread and milk poultice, and a dose of salts, allayed these symptoms within twenty-four hours.

The same day I inoculated two children at No. 7, Marshall-street, London-road; whose father I had

endeavoured to convert before, but in vain. Hearing that a child in the next apartment had the small-pox, I renewed my efforts; and prevailed. These children were just recovered from the itch, and their skins were impregnated with sulphur; which checked the progress of the vaccine pustules; so that, after once emerging, they continued almost stationary several days, neither increasing in magnitude, nor forming an areola. What is most singular, about a fortnight after their first appearance, they became more expanded, more elevated, and arrived at their full growth; having a beautiful efflorescence around them.

The child who had the small-pox in the next room, was supposed by his parents to have had that disorder before; a mistake which is too common. For that mistake, his life now paid the forfeit. The two children in the contiguous apartment, notwithstanding the vaccine inoculation threatened for a while to prove abortive, were preserved by its efficacy from that imminent danger, to which they were exposed.

September 1st, a poor woman, of the name of Bence, at No. 120, Kent-street-road, sent to me, when in that neighbourhood, desiring me to inoculate her and her two children for the Cow-pox; with which I readily complied. She then complained of a slight headach; and one of the children was rather drooping; the cause of these indisposions was supposed to be a slight cold; but their degree was not such as

to justify my delaying the means of defence, when the small-pox was raging in that neighbourhood with the most unremitting fury.

When I next called on these patients, I found them confined to their beds, and labouring under a typhus fever; to which, probably, it was owing, that vaccine infection had not taken place in a single instance, although they had all been inoculated with recent matter. Extreme debility, arising from extreme want, must also have had some share in this failure.

Since their recovery from this fever, I have excited the vaccine pustule in the mother by one more inoculation, and in one of the children by two; the other has been twice inoculated, since that time, but in vain. I hope, however, to succeed in some future attempt.

September 2nd, I inoculated with vaccine virus two children of Mr. Dunn, at No. 19, Marshall-street, Carnaby-market; and they had the disease in the usual mild form. Since that time, the confluent small-pox has been in the house; but they suffered not the least inconvenience from that probation.

September 3d, Mr. Saunders, of No. 11, Silver-street, Golden-square, brought his child to me to be inoculated for the Cow-pox; and continued to bring him till the ninth day, when the pustule was extremely fine. Since that period I have never seen him;

which appeared to me a little *ungrateful*, considering the inoculation was performed *gratis*.

This I should have scorned to mention, had not Mr. Saunders disseminated as widely as possible, reports injurious to the practice; without having any just cause for complaint. The truth is, that the small-pox was making a most terrible havock in his neighbourhood, when he brought his infant to be inoculated for the Cow-pox; and two children lay dead of it at the next door, at that very time.

Dr. Underwood having heard a false report concerning this case, I sent to Mr. Saunders to ask the particulars; and he had the assurance, at first, to deny that his child had been exposed to the infection of the small-pox; and had not the candour to acknowledge that it was at the next door, and had proved so fatal there, till the person whom I sent insisted it was a fact.

September 10th, I inoculated a child of Mrs. Eveleigh, at No. 14, Leicester-street, Swallow-street, with the Cow-pox. About the latter end of February, this child was at several places where the small-pox was; but received no infection.

Mrs. Franklin, at No. 51, King-street, Golden-square, applied to me on account of one of her children, who had the small-pox. I prevailed on her to have her other child inoculated for the Cow-pox; but

failed to produce the disease. A second insertion of matter also failed; so that a third inoculation, which proved successful, was not performed till the seventh day. In this case, as well as in many others of a similar kind, in the practice of different persons, the Cow-pox appeared to have totally superseded variolous contagion. That it often fails to produce this happy effect, has been already proved; but, in general, it mitigates the disorder.

September 13th, a child of Mr. Perkins, in Marshall-street, Carnaby-market, was brought to me, to be inoculated for the Cow-pox. Infection did not take place; and, while the parents delayed to send her again, she was seized with the small-pox, and died of that disorder. Mrs. Drake, abovementioned, whose second child I had inoculated a few days before with vaccine matter, was positively assured by a shopman of Mr. Perkins, that the child had had the Cow-pox previous to the small pox. Such are the foundations on which the charges against the new inoculation rest.

I have now received attestations from several gentlemen of Maldon; all positively contradicting the report, of any person having had the small-pox after the Cow-pox, in that place.

Having heard that some cases had occurred at High-Wycomb, in which the new inoculation had been found ineffectual, I wrote to Mr. Slater, the gentle-

man who inoculated the persons alluded to, requesting the particulars; from whom I received a polite answer, expressing, that as the cases happened long ago, and no memorandums had been kept, it was not in his power, to give any information, but the following.

The matter, he says, was procured "from Mr. Jenner, brother to the doctor." I know not that Dr. Jenner has a brother; but we will admit, for the sake of argument, that it was procured from Dr. Jenner himself.

With this matter Mr. Slater inoculated eight children; and was of opinion, that they all had the disease. We have, however, no proof, that Mr. Slater has ever seen the disease; so as to be able to judge whether in any one of these cases it was really excited or not. We have no proof that the matter was used while it was recent; or that any thing more than an inflammation, and festering of the arms, instead of the genuine well-marked vaccine pustule, took place.

The number of persons inoculated in this manner was eight. Of these, six at least have since had the small-pox, in consequence of inoculation. Concerning the other two, Mr. Slater is rather doubtful; but, with his senior partner, Mr. Bell, whose judgment Mr. Slater highly extols, and not without reason, "no manner of doubt existed;" and Mr. Bell has

been concerned in no less than four general inoculations.

Ample proof is furnished, in Mr. Slater's letter, that his patients had the small-pox; but not the least, that they had the Cow-pox. When Dr. Jenner was informed of the answer which I had received, he sent me word, that *he was not sorry Mr. Slater's cases hung in clusters.*

Did I not believe it impossible, that such an anecdote, when properly explained, can hurt any cause, I would write to the parents of the children, who are the subject of these observations. Suffice it to say, that if either Mr. Slater or any other gentleman, can produce the same effect on *one* of my patients, as he produced on *every one* of his own, I will forswear vaccine inoculation; and never take up a pen in its defence again.

September 30th, a child of —— Atkins, Brooke's Mews, Grosvenor-square, was brought to me to be inoculated for the Cow-pox; the small-pox having at that time been in the next apartment to that in which he resided, for several days. Vaccine inoculation succeeded. The small-pox likewise took place, and shewed itself on the seventh day; but in the mildest form possible; so as to leave no doubt of its being corrected by the Cow-pox.

October 4th, Mr. Thompson, of Beak-street, Gold-

en-square, desired me to inoculate with the Cow-pox, a young man who was come from the country to live with him; the small-pox being in his house. Inoculation proved successful; and secured the patient from variolous contagion; notwithstanding he was obliged to pass and repass the door of the apartment where it prevailed, every day.

October 10th, I inoculated Mrs. Ker, No. 11, Orange-court, Leicester-fields, and her child, with vaccine virus. Infection took place in both; and, although the woman was pregnant, not the least inconvenience ensued. This important advantage, which the Cow pox possesses over the small-pox, has been observed by all other inoculators who have made the experiment; particularly by Dr. J. H. Marshall, Dr. Jenner, and his nephews.

One material point deserves attention. Is the fœtus rendered insusceptible of the small-pox, in consequence of the mother's undergoing vaccine innoculation? Whether, in any case, it participates in that advantage, it is not possible to say; but in several cases which have occured to Dr. Jenner and Mr. Jenner, the children, when born, were susceptible of the vaccine infection; and we may suppose, by a parity of reason, they were also susceptible of the small-pox.

A surgeon from the country lately came to consult me, respecting the safety of inoculating a lady who

was in a state of pregnancy, with the Cow-pox, together with her children; the small-pox being in the neigbourhood. The surgeon did not know, that the experiment had ever been made. I shewed him Dr. Marshall's letter in Dr. Jenner's publication; which dispelled his fears, as well as those of the husband, with regard to the safety of the practice; and, by the answers which I gave to other questions, I flatter myself, I removed their doubts, with regard to its efficacy.

What a striking contrast may be remarked between vaccine and variolous inoculation in pregnancy! The former hitherto appears perfectly harmless; but Dr. Pearson says, in his Inquiry, " In pregnancy, the inoculated small-pox is so commonly mortal to the unborn, in every period of gestation, that no prudent practitioner would chuse to inoculate under these circumstances; but to escape taking the disease by effluvia, in the casual way."

He then alludes, to his " Paper on the Effects of the variolous Infection on pregnant Women, in the Medical Commentaries, vol. IX. decade 2d. 1795." —In that paper he says, " In about twenty cases to which I can refer, of the natural small-pox, under similar circumstances of pregnancy, the disease proved fatal to three-fourths, or four-fifths of the women; and to a still greater proportion of the fœtuses."

He also observes, that among the few who survive,

abortion, and a disposition to the same accident in future, are likely to take place. Here, therefore the advantage of vaccine inoculation is immense.

In October, I inoculated a child of Mr. Bolton, in Cole's-place, Kent-street; and several other children in the same neighbourhood. They all escaped the small-pox; although, at the time when one of them was inoculated for the Cow-pox, three children lay dead within four doors of the house.

October 8th, I inoculated the child of Mr. Taylor, No. 49, Kent-street; whose case has been already mentioned. In this case, infection of the small-pox had been previously received; and the eruption appeared on the eighth day, threatening to be virulent in the extreme; but it was soon ameliorated by the benign influence of the Cow-pox.

October 17th, I inoculated five children of Mr. Hall, in Winter's-court, Long-lane, Southwark; and, about the same time, many other children in the neighbourhood; in all of whom the Cow-pox appeared in its usual mild form. Among these was an infant of Mr. Humphries, of Winter's-court; who has since been exposed to the full infection of the small-pox, in consequence of a nurse-child, who was under the care of its mother, labouring under that malady; but no harm ensued.

October 23d, I inoculated a child of Mr. Webber,

No. 2, Leigh-street, Red-lion-square. In this instance also, previous infection had been received, and the variolous pustules appeared on the sixth day; but the case was attended with a favourable event.

October 28th, I inoculated a child of Mrs. Cottrell, No. 23, New-street, Carnaby-market. In this case, a spurious pustule rose the same day, which increased in size for the space of two or three days; and then decreased, so that on the fifth or sixth it was nearly gone. At that period the true pustule began to appear, on the same spot; and continued to increase for five or six days; furnishing a copious supply of genuine matter for other inoculations.

October 29th, I inoculated three children of Mr. Hinge, in Webb-street, Bermondsey-road; and, about the same period, a considerable number of other children in the same parts. In one of Mr. Hinge's children, infection did not seem to have taken place, till I had inoculated her three times. Then the three punctures rose. This was at the end of fourteen or fifteen days.

One of these children has been put into bed with a person in the small pox; and another of them was left to play in the room the whole day: but neither of them suffered the least injury from that exposure.

November 4th, I inoculated two children of Mr.

Plummer, who now lives at No. 4, Tyson's-place, Kingsland-Road. Happening to go to this house lately, in order to inoculate three other children, I was informed, that in one of these a tuft of hair had sprung up in each arm, where the pustule had been. This is the second case of the kind. The first was published by Dr. Harrison; and is mentioned already.

So stupid were these people, as not to be prejudiced against the Cow-pox by this phenomenon. Had one of the candid opponents of the practice discovered it, he would assure the public, that the child is growing hairy all over its body, like Nebuchadnezzar; and publish the falsehood under the signature of *Verax*.

September 21st, I inoculated a child of Mr. Barrett, of George-street, Asylum. The infection seemed not to have taken place; but having no other patient in that neighbourhood at the time, I delayed to re-inoculate the infant, till a pustule rose, which rendered it unnecessary. This was on the fifteenth day.

In November I inoculated several children at Bermondsey Spa; and might have inoculated a vast number, had not the shortness of the days, the distance of the place, and the necessity of attending more to other business, prevented me.

While I was there, two children of Mr. Gray, No.

37, East-lane, Rotherhithe-wall, were brought to me to be inoculated for the Cow-pox, the small-pox having been in the house where they lived, for many days. Vaccine infection took place. The small-pox likewise appeared in one of them on the seventh day, and in the other on the ninth ; but in as mild a form as it ever appears in variolous inoculation. One of them had about two dozen of pustules; the other not above a dozen; and scarcely the least indisposition.

December 1st, a child of Mr. Allchen, King's-head Passage, Tooley-street, was inoculated with vaccine matter. In this case, the pustule did not appear till the sixteenth day; and was then very small; owing to the extreme debility of the infant.

December 3d, I inoculated several persons in Emanuel-court, Long-lane, Southwark; the small-pox having already found an entrance there. Among others were —— Monday, together with his wife and child. In the man, infection of the Cow-pox failed; and he had the small-pox, in some degree confluent; but recovered. His wife and child were so fortunate as to receive the vaccine infection; and although they slept with him the whole time, were not infected with the small-pox.

The child of —— Grady, in the same court, was inoculated with the Cow-pox; and thereby protected from the contagion of the small-pox.

Had not a wrong direction been given, I have reason to believe, that the small-pox would never have gained admission into that court. I had been desired to go and inoculate some children there; but the right name of the court was not given; and when I called repeatedly, the person from whom I received that direction, was not at home.

In consequence of this delay, a nurse-child of Mrs. Pikeland was attacked with the small-pox; which terminated fatally within a few days. A sister of this child was inoculated with the Cow-pox, a day or two after the small-pox broke out in the house. The Cow-pox took place; yet she did not quite escape the small-pox. About twenty or thirty pustules appeared on the fifteenth day; extremely fugitive, and attended with very little constitutional indisposition.

December 6th, when I was at No. 37, East-lane, Rotherhithe-wall, and found the two children of —— Gray infected with the Cow-pox, and with a small number of variolous eruptions scattered over them, a child was brought from the next door, to be inoculated for the Cow-pox, before I was apprised of it; otherwise I would not have suffered it to be exposed to that danger.

Having no other vaccine matter present, I did not hesitate to inoculate this child from the vaccine pustule on the arm of one of the children, in whom there

was a co-existence of this disease and the small-pox; and with a happy event: the pure vaccine disease took place. Variolous infection was at that time prevalent in the house; for, exclusive of my patients, one child had died in the house a few days before; and another then lay ill of that distemper.

December 6th, I inoculated a child of Mr. Pearce, No. 12, George-street, Asylum, with vaccine matter. Infection took place. What deserves to be noticed in this instance, is, that the child had an eruption on the arms, at the time of inoculation; and happening to scratch off the heads of some of the pimples, and inoculate himself in so many places, about a dozen perfect vaccine pustules were produced; exactly similar to those produced, by inoculation with a lancet.

January 9th, 1801, I was desired to inoculate with recent vaccine matter, a daughter of Mr. Beekvelt, No. 17, Eagle-street, Red-lion-square; who had been twice inoculated with dry vaccine matter, within a few days, but to no purpose. During that period, the small-pox had been in the apartment. The matter which I inserted proved successful; and in all probability superseded the infection of the small-pox; to which, in none of its mildest forms, the patient had been exposed five days.

March 3d, I inoculated a child of Mr. Osborne, at Mr. Wilkins's, Market-row, Oxford Market.

Three children of Mr. Wilkins have since had the small-pox; yet this infant, though surrounded with a variolous atmosphere, escaped infection.

But why should I mention the particular cases, in which my patients were thus exposed, since there are few of them, concerning which I have made an enquiry, who have not been endangered by actual communication with the contagion of the small pox; if any one who has had the Cow-pox can be thus endangered. The majority of them were inoculated at a time, when that cruel destroyer of mankind raged in all its fury; committing the most dreadful havock on every side.

Thus it appears, that the fond hopes of Dr. Jenner are likely to be realized; that the utility and importance of the services which he has rendered the world by his discovery, rest on a sure foundation; and that he is entitled, not only to the highest honours which his country can bestow, but to the sincere veneration, and eternal gratitude of the whole human race.

Nor is it the least praise of this new practice, that, while it alleviates, and almost annihilates the sufferings of the patients, and at the same time affords a permanent security against the small-pox, these advantages are ensured almost without any loss of labour to themselves, their families, or the state. Several persons whom I have inoculated, have under-

gone the most severe toil, and been exposed to the extremes of heat and cold with impunity.

The members of society will no longer be torn from their dearest connections, nor the poor doomed to a pest-house, by their inveterate and implacable foe. Nor will agriculture, or manufactures, or the public service be neglected, or villages desolated, or towns deserted, or countries depopulated, by the rage and the ravages of the small-pox. Future ages will revere the memory of that man, to whom, under heaven, we are indebted for our deliverance.

The real merit of the author of the new inoculation appears, even yet, not to be well understood by the public in general, or even by the bulk of medical men. It consists not in the discovery, that the vaccine fluid possesses an antivariolous virtue; but in a discovery of the means, by which that fluid may be reproduced; and by which the practice of vaccine inoculation may be propagated, and, if necessary, perpetuated. This is the most valuable discovery, —this is the most noble invention that is on record, since the foundation of the world.

Were the public sensible of the full advantages that might be derived from this discovery, public dispensaries would be appointed for promoting the practice, in every town throughout the British dominions. In the metropolis a central edifice would be devoted to that purpose; and be called *the Jen-*

nerian Institution.—As to the honour of superintending this institution,—*Detur digniori.*

Were all mankind sensible of the benefits that will accrue from the practice, they would share the glory of erecting that temple of health. Kings would be ambitious of rearing such an edifice; and emperors would contend for the honour of laying the first stone.

I shall now state, what information has been received respecting the progress of vaccine inoculation in foreign parts, since my last account was written. I have already noticed its introduction into Holland; but had not then received particular intelligence, concerning the success of the practice in that part.

I am now favoured with the perusal of a letter, received from Dr. Davids of Rotterdam, by Dr. Jenner; from whom he had procured vaccine matter. In this letter he informs Dr. Jenner, that he has been so happy as to introduce the Cow-pox through the whole country, with the greatest success; and that the name of Dr. Jenner is adored. He says, the Cow-pox inoculation was introduced, just at the moment, when the small-pox was making its ravages on every side; yet not one of those who had undergone the inoculation of the Cow-pox, received infection.

He has translated Dr. Jenner's treatise, and promises to send him a copy of the work; in the pre-

face to which, he says, is an observation concerning an Arabian manuscript found in the Leyden library. It is probable, this manuscript throws some light on the subject now under consideration.

I am informed by the Rev. Mr. Jenner, that the practice is also established in Russia. Dr. Halliday has inoculated several persons in the hospital at Petersburg, with the greatest success. It is supposed by Guthrie, that this country, from which issued those prodigious swarms of barbarians, who overthrew the Roman empire, must formerly have been much more populous; and that the introduction of the small-pox may have been one of the principal causes of that depopulation. Whether this opinion is well founded or not, the modern Alexander is under no small obligation to Dr. Jenner.

Among other intelligence lately arrived from India, by an overland dispatch, it is not the least important, that vaccine inoculation has been introduced into Bengal, with its accustomed success. For the vaccine fluid they are most likely to have been indebted to Dr. Whyte; who, in his letter from Constantinople, says, he has lately transmitted some of the valuable preservative to a friend at that place, by an overland dispatch. But from whatever quarter the boon was received, India, and all Asia, will participate this blessing; and revere the name of Jenner.

By the last advices which I received from Dr. Marshall, dated Palermo, March, 27, 1801, I have the pleasure to find, that he has accomplished the great object of his ambition, and established the practice recommended by Dr. Jenner, in the Neapolitan dominions.

He arrived at Palermo on the 12th of March; and inoculated two children with dry matter, fifteen days old, which succeeded perfectly well. From them he inoculated others. The disposition of the king of Naples to this practice is extremely favourable. As soon as Mr. Paget had informed him of Dr. Marshall's arrival, his majesty ordered his first physician and surgeon to wait on him; and requested that he would undertake the direction of a vaccine hospital; to which he readily acceded.

By a gazette which Dr. Marshall inclosed, it appears, that this hospital was appointed. It was to open on the 31st of March. All ranks of people in Sicily are favourably disposed to the new species of inoculation; and since it is honoured with royal patronage, it must soon extend to Naples; and have but few difficulties to encounter. What benefits will our countryman confer on that unhappy land? What consolation must he afford, when he brings the blessing of health to a nation depopulated by the scourge of war, and pours balm into her bleeding wounds!

Dr. Walker was still in the fleet commanded by

Lord Keith.—In respect to the practice of Dr. Marshall at Palermo, we are informed, that the disease preserved its usual mild character; and had not deviated in any one particular from its appearance in England.

By the gazette published at Palermo, dated March 27, 1801, which Dr. Marshall sent me, we are informed, that the English minister at that court notified to the minister of his Neapolitan majesty the arrival of Dr. Marshall and Dr. Walker; who, by order of government, had propagated in our fleet and armament in the Mediterranean, the vaccine inoculation; which, in the British isles and elsewhere had been found an infallible preservative against the smallpox.—His majesty was pleased to receive them with benignity; and graciously to accept their service.

With this laudable and beneficent design, he resolved to found an hospital at Palermo; where under the direction of Dr. Marshall and Dr. Walker, his first physician, Cav. Giovanni Vivenzio, and his first surgeon, D. Michele Troja, shall preside; that a number of persons being inoculated with the Cowpox, and the physicians and surgeons of the country instructed in the practice, the happy discovery of Dr. Jenner may be more easily introduced, and perpetually established in those kingdoms.

The important object of this resolution of his Neapolitan majesty is, to banish from his dominions

that terrible scourge, the small pox; which has so often occasioned the most melancholy havoc there; of which the late fatal variolous epidemic afforded an example.

While our countrymen thus kindle the lamp of science in every clime, and shed the blessings of health and happiness around, they maintain the honour of Britain; who has rendered herself illustrious, by her achievements in arts as well as in arms; and made both Minervas her own.

In a letter which I had previously received from Dr. Marshall, dated Malta, Feb. 16, 1801, he informs me, that the progress of the Jennerian disease in that island is rapid, and its appearance uniform; and that he hopes it is now planted there, never to be eradicated.

He also remarks, that at Palermo, the ravages of the small-pox are great; and that the blessings of the Jennerian practice will be proportionally great.

The last reports of vaccine inoculation at home, are no less satisfactory than those received from abroad. The Medical Journal contains, as usual, abundant information on this subject. The first article in the number for May, 1801, is a communication from the Rev. Mr. Jenner; who, in order to refute the false reports, which have been circulated by some prejudiced persons with so much industry,

published an account of his own practice, of which I have already made honourable mention.

He informs us, that since the month of December, 1799, he has inoculated nearly three thousand persons for the Cow-pox; a very great number of whom have since been exposed to the contagion of the small-pox, in every way that can be imagined, without its producing the least effect.

To place this in a point of view, at once striking and within the reach of enquiry, he mentions the inoculation which took place at Burbage in Wiltshire, near the seat of the Earl of Aylesbury. Being there on a visit last spring, he gave a general invitation to people of all descriptions, to come and be inoculated. His offer was accepted by men, women, and children, to the amount of six hundred; who went through the Cow-pox in the usual mild way.

Some months afterwards, the village was visited by the small-pox; which made dreadful havoc among those who had not availed themselves of Mr. Jenner's invitation; while those who had accepted it remained secure, although there was a general intercourse between them during the whole period.

The next article in the Journal is a case of the small-pox occurring a second time; by Mr. Purton, of Alcester, member of the Royal College of Surgeons in London.

Mr. Purton says, it has been so generally considered as a fact, that a person once infected with the small-pox is safe from having it again; that he feels a considerable degree of diffidence in sending the statement of a case, by which it is indisputably proved, that it is possible for the variolous infection to take place a second time in the same person; and that, even in the natural way.

He tells us, his partner, Mr. Bloxham, a gentleman of sound judgment, who has been established forty years in a very extensive business, and who visited the patient with Mr. Purton, through every stage of the disease, has not a doubt of the nature of the case; and that he himself is no less thoroughly convinced of its accuracy.

Mr. Purton had before heard of a case of this kind, which was well authenticated; and which, he says, was sufficient to stagger the firmest sceptic.—He says, the circumstance of a person having the small-pox a second time, must be considered as a singular phenomenon. Medical records, however, as well as oral testimony, prove the contrary; unless we determine, only to admit the evidence of those facts, which fall under the observation of every person, and occur every day.

That the measles may occur a second time, I have great reason to believe, from my own practice; and still more, from the same opinion having been ex-

pressed by Mr. Jeaffreson, at the Medical Society; but most of all, from its being positively declared by that oracle of cutaneous complaints, Dr. Willan.

In two cases related by that learned and accurate physician, there was only an interval of two or three days. In two others, there was an interval of two years. It is worthy of notice, that Dr. Willan confesses, he has occasionally heard of similar instances from other members of the medical profession; but he was never before convinced.

This was the case, with regard to the co-existence of eruptive disorders. Instances frequently occurred; but as they militated against certain preconceived opinions, reduced to dogmas, and held sacred in the schools of theory, those who met with them were in general silent; partly from a distrust of their own judgment; and partly from the fear of ridicule and contempt.

That such a recurrence of any pestilential disease is possible, we must sincerely regret; but ought on no account to conceal. To divulge the whole truth, on such an occasion, is only justice to medical practitioners, to the practice of inoculation, and to the public.

If any one who was before convinced of this truth, felt a reluctance to avow that opinion, lest he should excite alarms, and awaken the feelings of a tender

parent for the safety of a beloved offspring, let him reflect, that we have now but little to apprehend from the small-pox; and that we have it in our power to crush the seeds of that distemper. The human species may consider it as their own fault, if they do not utterly destroy the infection of the small-pox; and then it will be of but little consequence, whether they are susceptible or not. If the citadel should still contain a small quantity of combustibles, they may secure themselves from danger, by cutting off the train.

Exclusive of cases to which I have been a witness, in which either the measles, or an exact resemblance of the measles, took place a second time, an instance of the kind occurred in the family of Mr. Hartley, in Broad-street, Carnaby Market; of which Mrs. Hartley gave me a very circumstantial account. The eruption, preceded by, and attended with all its usual symptoms, appeared for a single day; and then disappeared. It appeared again after the expiration of five weeks; and completed its course. The cause of this inability in the constitution, to discharge at once the load of disease with which it was encumbered, was supposed to be, that the infant had lately undergone the small-pox; and was much debilitated by the disorder, as well as by the cathartics exhibited on that occasion.

Mr. Purton justly observes, that he can see no reason why the case related by him should injure the

cause of variolous inoculation; since the patient received infection, each time, in the casual way. In the first attack, her mother caught the complaint from her, and narrowly escaped with her life. This happened near twenty-two years ago; and Mr. Purton says, she had the disease very violently; as the marks at this time sufficiently attest.

"On the 11th of March last, the whole village of Exhall was inoculated with variolous matter; and this young woman was appointed one of the nurses. On the 3d of April, she was attacked with severe rigours, pain in the head and back, sickness, and the other usual symptoms of an approaching fever. The two following days she was extremely ill: the fever increased to an alarming height, attended with delirium, through most part of the night previous to the appearance of the eruption, which shewed itself on the 6th of April, early in the morning. The eruption continued to increase for several days; her throat became sore, with a sense of fullness, from the number of pustules covering the fauces; and they continued filling, till they were completely maturated. About the ninth day from the appearance of the eruption, those upon her face began to turn; and, in a few days after, those upon the rest of her body."

In the same number of the Medical Journal, is a paper on the subject of the Cow-pox, by Mr. Watt, of Paisley. Mr. Watt endeavours to prove, that the constitution is susceptible of vaccine contagion

after the small-pox, provided that contagion is properly applied. Of this he has adduced one instance, in which a man who had been handling the virus, applied it to his nostrils; and produced pustules in those parts.

How often infection will take place, from an application of the matter in that way, few persons, perhaps will be willing to try the experiment; especially when it is doubtful, whether such experiments can ever be of much consequence in practice. It is certain, however, that the excitability of the system, with respect to this virus, is much diminished, both by the action of vaccine and of variolous matter on the constitution. Of this I shall here mention one remarkable instance; namely, that the Rev. Mr. Jenner has inoculated himself near fifty times; and at length has only been able to excite one spurious and diminitive pustule.

Mr. Watt informs us, that the person who thus casually inoculated himself, had been subject to ulcerations of the nostrils, which at that time were worse than ever; and that the parts are now sound; and the skin stronger than it has been for several years past. Hence Mr. Watt, proposes a question, Whether the insertion of vaccine matter into some inveterate ulcers may not produce a permanent cure?

It has already been observed, that this disease was supposed by some practitioners to have proved a

remedy for scrofula. Other fond hopes are entertained by the favourers of this inoculation; which I shall be happy to see realised.

Credimus? an, qui amant, ipsi sibi somnia fingunt?

Mr. Watt relates another case, in order to prove, what is now generally acknowledged, that the Cow-pox and the small-pox may co-exist, and yet remain perfectly distinct.

A child who had received variolous infection, being inoculated with the Cow-pox, sickened for the small-pox on the fourth day; and on the fifth, an eruption of about a hundred pustules appeared. The fever at the same time abated. The pustules continued only seven or eight days; and during that time the child was in good health.

The vaccine inoculation took place; and went through its regular stages, in the same manner as if no other disease had existed. This is agreeable not only to what has been observed by many practitioners in this kingdom; but it is also confirmed by the last report of the medical committee for vaccine inoculation established at Paris; who remark, that other diseases are frequently suspended by the Cow-pox; but the small-pox and the Cow-pox pursue their course together. I have, however, seen exceptions to this rule.

Mr. Watt found the vaccine virus uncontaminated

on the eleventh day. Several instances are recorded in this volume; where, under similar circumstances, vaccine and variolous matter were blended. This shews how cautious practitioners ought to be in generalizing facts; and how dangerous it is to draw conclusions from a solitary case.

Mr. Watt asks, whether vaccine inoculation may not render the small-pox more mild, when infection is already received? This question I have no hesitation in answering in the affirmative, as far as our present experience enables us to decide.

I before announced the distinguished honour, which the physicians and surgeons of the navy intended to confer on Dr. Jenner. The gold medal voted by those gentlemen has now been presented; together with an address, of which the Medical Journal contains a copy.

The authors of this address observe, that Dr. Jenner is, perhaps, no stranger to the introduction of the new inoculation into the navy, by order of the Lords of the Admiralty. By enquiries instituted in the Channel, it has been ascertained, that the small-pox has been imported more than a hundred times within the last seven years; and in twenty different instances, within the last six months, by the grand fleet alone. It is no wonder the disease was attended with uncommon mortality, when the subjects whom it attacked were so ill prepared for its acception.

The address then states, that as far as vaccine inoculation has been practised in the navy, it has been crowned with the usual success. The subjects of it have not even been entertained on the sick list.

The authors of the address declare, that although prevented by their situation from receiving the earliest intelligence of improvements in medical science, they have not been passive spectators of an event so singular, as the discovery of a substitute for the small-pox; an event, which the philosopher will contemplate with wonder, and the friend of the human species view with exultation. It is only justice to the singular merits of the Medical Journal, to remind the reader, that the publication alluded to, which contains the quintessence of all improvements in medicine, and which not only commenced its auspicious career with an account of this important discovery, but has ever since been the grand vehicle of intelligence on the subject, is one of the principal sources from which the medical officers of the navy derived their information.

The medal is embellished with suitable devices. It represents Apollo, the god of physic, introducing a seaman recovered from vaccine inoculation to Britannia; who, in return, extends a civic crown, on which is inscribed JENNER.

The motto is peculiarly happy:—ALBA NAUTIS STELLA REFULSIT. The date, 1801.

On the reverse is an anchor. Above, GEORGIO TERTIO REGE; below, SPENCER DUCE; expressing the reign in which, and the name of the noble lord, in whose naval administration, and under whose auspices, this valuable improvement of the healing art was introduced into the navy of Great Britain.

The gentlemen who confer these honours on Dr. Jenner, and whose act reflects honour on themselves, declare, that Dr. Jenner's opinions and practice have excited uncommon attention among them; and that they have earnestly sought after every kind of information, relative to the vaccine disease. Dr. Trotter, the physician of the Fleet, was therefore requested to present to Dr. Jenner, the gold medal voted by the medical officers of the navy; at once expressive of their sentiments in favour of the new inoculation, and of its introduction into that department of the public service. The address contains an encomium on the councils of a nation, which, by timely precaution, wards off so great a share of human misery.

In the execution of the task assigned to him, Dr. Trotter informs Dr. Jenner, he is confident, no token of respect, bestowed on a benefactor of the human race, was ever conferred from more honourable, or more disinterested motives; and concludes, it will not be the less acceptable to Dr. Jenner, that it comes from a body of officers, connected, by the exercise of their profession, with the most brilliant period of our naval annals.

He observes, that as far as their authority has influence, they thus offer their warmest support to the cause.—He observes, that the progress of truth is sometimes slow;—but always certain.

He expresses a hope, that this beneficial practice will become universal; and, in the name of his naval associates, congratulates Dr. Jenner on the honours that await his professional exertions.

He expresses a wish, that the present age may have the justice and public spirit, in some measure to remunerate those services, on which posterity will know how to set a proper value; and that the members of the medical profession will do justice to Dr. Jenner; and acknowledge the magnitude of the public benefits derived from his labours.

He expresses a wish, that the distinguished author of this improvement of the healing art, may be blessed with length of days,—and live to see the fruits of his discoveries;—discoveries, tending so much to alleviate the sufferings of humanity, throughout the habitable globe; and that his example may be a model to the rising members of that profession, which he so highly adorns.

The address is signed by Dr. Trotter, Physician of the Fleet, Dr. Boys, of the hospital at Deal, Dr. Cudlip, of Mill Prison, Dr. Snipe, of the hospital at Yarmouth; and Dr. Whyte, late of the navy, who

introduced the practice into Constantinople, by inoculating the only son of Lord Elgin, the English Ambassador at that court, and others. It is also signed by above eighty surgeons of the navy.

The same number of the Medical Journal contains a letter from Mr. Grose of Winslow; on the subject of pustulous eruptions in the vaccine inoculation. Mr. Grose observes, that these are commonly ascribed to variolous infection; and says there are persons so illiberal, as to censure the new practice on that account. If there is any one so illiberal and unjust, as to censure the practice for the fault of the practitioner, or the Cow-pox for the crimes of the small-pox, vaccine inoculation will never be afraid of incurring such a censure.

Mr. Grose declares, he shall hesitate to believe, that pustules resembling the small-pox are the effect of variolous contagion, until very substantial evidence is adduced to prove it. How far the evidence brought forward in the preceding pages, may be deemed substantial by those who are still sceptical on this point, I know not; but to me it appears decisive.

Mr. Grose regrets that a course of medicine is so seldom entered on, previous to the inoculation of the Cow-pox; and thinks no good reason can be assigned for its omission. I therefore beg leave to assign one; which is, that it is unnecessary. In this opinion I

am supported by the universal suffrage of the medical profession, with one exception only. In another opinion, which I published long ago, that cathartics are not necessary after an eruptive disease, I am supported by many respectable members of the profession. Such doctrines may give umbrage to those, who think they have a right to physic every person *before* every disease, *during* every disease, and *after* every disease; a right they have exercised from time immemorial; and for which they may plead *prescription.*

In the same Journal is a letter from Mr. Bevan, of Stoke-upon-Trent; in which he mentions two cases of co-existence of Cow-pox and small-pox. In both instances, the variolous eruption was so modified by the vaccine disease, that it arrived at its maturity on the third day. Mr. Bevan committed the common error; and supposed the credit of the Cow-pox at stake, when his patients had been previously exposed to the infection of the small-pox.—The editors of the Journal betray a reluctance, to admit that the eruption which appeared was variolous; but, I think, without reason.

I have already mentioned the fatality of the small-pox among the Esquimaux Indians. I now learn, that those unfortunate people were indebted to this country for that curse. A woman who was brought to England caught the small-pox, which appeared when she was at sea. Her hair was cut off. This

she artfully concealed; and it proved a fomes of disease; as she herself proved another Pandora to her native land.

Several other miscellaneous observations having been communicated to me, since I wrote on the respective subjects to which they relate, I shall subjoin them here, as a kind of supplement.

I am informed by Dr. Jenner, that in the case where the Cow-pox could be traced by Mr. H. J. Jenner from the grease, a boy, having drawn a string backwards and forwards, over the heels of the horse, drew it repeatedly across his fingers, till he had caused an abrasion of the cuticle. Thus the subjacent parts were inoculated with the virus of the horse; and the disease resembled the Cow-pox; the lymphatics exhibiting beautiful tints of red, in consequence of that affection.

As additional proofs that immunity from the small-pox may be obtained from the Cow-pox, Dr. Jenner inoculated a servant of ——— Calcraft, Esq. M.P. who had undergone the vaccine disease twenty years before, three times with variolous matter; but in vain.

Mr. Williams, of Nass Farm, Lidney, Gloucestershire, had the Cow-pox about fifty years ago. He has thirteen children; all of whom have had the small-pox. Mr. Williams resided with them during their

whole illness; and has been four times inoculated for that disorder; but without the least effect. This account I received from one of his relations.

The spurious Cow-pox is not well understood; any contribution, therefore, to our stock of knowledge, respecting that subject, may be deemed worthy of acceptance. Dr. Jenner informs me, that in one case of that kind, the number of pustules amounted to five hundred.

Dr. Hulme having desired me to send some vaccine matter to Mr. Stott, surgeon, at Wakefield, in Yorkshire, I complied with his request. I have since had the pleasure of hearing from Dr. Hulme, that it succeeded well; and that the disease has been propagated from this source, through the surrounding neighbourhood. Mr. J. Pearson, of the Temple, having occasion to go to Wakefield on some other business, I desired him to call on Mr. Stott; from whom, as well as from others, he learned, that the success of the practice in that part of the kingdom, has been such as to give general satisfaction.

In a former part of this treatise, I mentioned a case which occurred in the family of Dr. Garnett, the Professor of Chemistry at the Royal Institution. This happened, when the learned professor resided at Glasgow; and as he was the first who introduced the practice of vaccine inoculation into that place, I requested the favour of him to communicate the parti-

culars; in which he has been so obliging as to acquiesce, as far as his important occupations would permit.

"C. Garnett at the age of six months, was inoculated at Glasgow, on the 30th of May, 1799, with vaccine matter procured from London; being the first experiment of the kind in that city." Nothing remarkable appeared in this case. The inflammation of the arms was considerable; but that is not surprising, when inoculation is performed by means of thread, and of course, by an incision.

In the month of January following, this child was again inoculated, and with fresh vaccine virus; but it produced no effect whatever. Her sister, who had undergone the small-pox by inoculation, almost five years before, was also inoculated with the vaccine fluid; and proved susceptible of the disease. The child who only had the Cow-pox, has since been subjected to the test of variolous matter; but to no purpose.

From these two cases the learned professor draws the following inference: that although the Cow-pox is a preventive of the small-pox, the small-pox is not a preventive of the Cow-pox. The contrary, however, is the general rule; as is proved by ample experience; and the property of being a preventive of each other is reciprocal.

The following instance of inexcitability of the small-pox, in consequence of the Cow-pox, deserves to be recorded. When Mr. Dale of Liverpool was in London, Dr. Garnett introduced me to him, as the first practitioner who had practised the Cow-pock inoculation at Liverpool.

When Dr. Garnett came through that place, in November last, Mr. Dale shewed him a child of his own, who had been inoculated with vaccine matter above a year before, and with variolous matter eight days. This was taken from a patient, who laboured under a very bad case of the confluent kind.

"The arm," says Dr. Garnett, "had exactly the same appearance which it usually has, at that period after variolous inoculation; and, I must own, I was apprehensive, that the child would have had the small-pox; but the inflammation began to subside the next day, and in two days more, nothing was to be seen.

"This case tends to shew, that the vaccine disease certainly prevents the small-pox; for if it was possible to produce the latter after the former, we should have reason to expect it would take place here; since the local disease was evidently excited, and to as great a degree as I ever saw it excited in the time."

In February last, the committee of Vaccine Inoculation in Paris, published a short Memoir, entitled Instruction concerning the Cow-pox, by which it ap-

pears, their knowledge of the subject is much improved, since their former publication. In the present Memoir, they have established a nomenclature; which I shall here subjoin; for the sake of those into whose hands any treatise on this important branch of medical science, written in the French language, may happen to fall.

By *vaccine*, they understand the Cow-pox; by *vaccin*, or *fluide vaccin*, the Cow-pox matter; by *vacciner*, to inoculate with the Cow-pox, and by *vaccination* the inoculation of the Cow-pox.

It cannot but surprise an English reader, that the committee for Vaccine Inoculation at Paris, should ascribe the discovery of the Cow-pox to Dr. Jenner. Their expression is, Dr. Jenner was the first who ascertained, that the Cow-pox is frequently communicated to those employed in milking cows.

I hope a time may come, when the committee will no longer deem it necessary to make more than one puncture in each arm.—The last rule laid down by them, meets with my ready concurrence. It is, that if any one inoculates a person who has had, or who is only suspected to have had the small-pox; he ought not to use the matter so produced; since he would incur the risk of giving, and consequently of propagating the spurious Cow-pox, which is not a preservative against the small-pox.

By the Moniteur of Quintidi, 5 Ventose, 1801, we receive intelligence of the success of Vaccine Inoculation in France, that must prove grateful to every benevolent mind.

After ascribing the advantages which they now derive from the Cow-pox to the commendable zeal of French citizens, they say, this method of preserving mankind from the ravages of the small-pox, which is equally commodious and certain, was practised with success in England, when M. de Liancourt, on his return to France, proposed a subscription, for the sake of trying experiments, and ascertaining the efficacy of that practice.

Citizens Guillotin, Thouret, Le Roux, Colon, Marin, &c. were the committee chosen by the subscribers to superintend and direct the experiments; and, we are informed, they have had the satisfaction of seeing their labours crowned with all the success they could desire, in so short a space of time. The Cow-pox has spread with great rapidity through all ranks of society; and through those departments, where the small-pox has committed the most dreadful ravages for some years past.

We have the authority of Dr. Colon, whose exertions in promoting this practice merit the most sincere acknowledgements of the public, for asserting, that the number of those who have been inoculated for the Cow-pox now amounts to several thousands;

and that a great part of the medical practitioners in the different provinces have hastened to cause their fellow citizens to enjoy the benefits of this practice.

" The success of the new method of inoculation," they affirm, " is now undeniably proved." It is demonstrated, that it is a preservative against the small-pox; and the experiment instituted at the Prefecture of Paris, carries with it the most complete and absolute conviction, in that respect.

By this experiment, which the faculty calls a counterproof, seven children, who had been inoculated with the Cow-pox three or four months before, by Dr. Colon, were inoculated for the small-pox by Citizen Anè, inoculator; in the presence of a number of physicians and surgeons. The matter was taken from a child, who had a very copious eruption of the small-pox. Of those seven infants, each of whom was inoculated with three punctures, not one took the disease.

Honourable mention is made of the names of several magistrates in France, who have distinguished themselves by their zeal, in promoting this beneficial practice. The very judicious and efficacious means, to which Citizen Corbigny, Prefect of the department of Loir-et Char, had recourse, in order to introduce the vaccine virus into that province, are worthy to be recorded; as it suggest a hint, which may be useful, when the small-pox breaks out in any par-

ticular place, as well as when a particular difficulty is experienced by any practitioner, in producing infection with dry matter. He sent an eminent surgeon to Paris, accompanied with an infant; in order that he might learn the practice of vaccine inoculation, and import the virus with which the vaccine disease was to be propagated through that department.

It is calculated, that in France, about one in fourteen dies of the small-pox. The total number of deaths in a year, is estimated at 900,000 on an average; and the number of deaths from the small-pox at upwards of 64,000. This, they justly observe, proves the importance of vaccine inoculation; which will hereafter snatch such a vast number of victims from death.

The Moniteur of the 8th Ventose, contains further intelligence, of the same satisfactory kind, on this subject. Thirty children, selected from a considerable number, who had been inoculated with the Cow-pox by Dr. Jadelot, first physician to the hospital des Eleves de la Patrie, have since been inoculated for the small-pox; but not one of them proved susceptible of the disease. In some of them a pustule appeared, in one or more of the places where the punctures had been made; but it dried in five or six days; and was not attended with the least ill consequence whatever.

In a majority of Dr. Jadelot's patients, the Cow-

pock occasioned no sensible indisposition. In the others it was but slight, and continued only two or three days.

Hence, we are informed, the safety and efficacy of the new practice are fully ascertained, and these important truths more and more established every day at Paris, by the attention and the labours of the committee of vaccine inoculation; and by those of the other practitioners, to whom vaccine virus had been sent by the committee.

The Memorial concludes with observing, that if to the foregoing considerations we add, that the vaccine disease is not infectious, we cannot doubt that the means of averting the small-pox will be as advantageous in the result, as they are simple and easy in practice.

Such articles of intelligence, conveyed through such respectable channels to the public eye, in this kingdom, might prove as conducive to the interest of the public, as the idle reports with which our daily prints are disgraced, by those who are conscious that their names would add no credit to their narrations.

The establishment of vaccine inoculation at Jamaica, has already been recorded. I have now the satisfaction, to add farther intelligence from that quarter. A letter from Mr. Rooke, the surgeon who introduced the practice, has been received by Charles

Rose Ellis, Esq. In this letter Mr. Rooke says, It is with extreme pleasure he is able to inform Mr. Rose, that he has at last succeeded in introducing the invaluable Cow-pock into that island.

The matter which Mr. Ellis received from Dr. Croft succeeded. Mr. Rooke is of opinion, that if he had not inoculated himself, he should still have failed, as others have done. He was at first inclined to suspect, from repeated failures of different practitioners, that people of colour were insusceptible of the disease; if such it can be called. He may hereafter boast, that the small-pox has been expelled from Jamaica by his own arm.

In many estates, the small-pox has lately proved extremely fatal. In one, on which there were not above 300 negroes, 22 were destroyed by that epidemic; but Mr. Rooke furnished vaccine matter, which soon put a stop to the ravages of that dreadful disorder.

Mr. Rooke inoculated all Mr. Ellis's people, except those who laboured under the yaws, in the midst of crop; without the loss of twenty days labour from the whole number; and with the most happy success. Eighteen of those who had undergone the Cow-pox, have been repeatedly exposed to variolous infection, both by contact and inoculation; but without effect. The same uniform success has attended it there as in Britain; and Mr. Rooke says, it will unquestionably

prove one of the most invaluable acquisitions, that ever Jamaica had to boast.

Since Mr. Rooke has ascertained its utility, it is becoming very general in St. James's, Hanover, Trelawny, and Wesmoreland; and he trusts, it will extend to all parts of the island.

I have already mentioned, that vaccine inoculation is now cultivated with success at Rotterdam. I am now informed, that among other places, it is established at Amsterdam; and is practised at the Foundling Hospital in that city.

In the 391st and 406th pages, I have enumerated 14 counties in England, in which the Cow-pox has been discovered. To these I have now to add, four others; for which I have the authority of the Rev. Mr. Ferryman. These are Sussex, Warwickshire, Derbyshire, and Nottinghamshire.

Every day furnishes evidence in favour of the new practice. A child of Mr. Corder, of Page's Walk, Grange-road, whom I had inoculated with the Cow-pox, has been exposed to the small-pox without receiving infection.

Dr. Hulme informs me, that he lately inoculated with variolous matter, a child whom he had inoculated a twelve month before with the Cow-pox. A

fine pustule took place; but no constitutional affection.

I have lately received from Mr. J. Ring, an account of three cases, in which matter, called Cow-pock matter, produced an eruption, consisting of flat pustules, full of opaque matter. No tyro in vaccine inoculation will suppose these were cases of genuine Cow-pox; or that the patients could be secure from the small-pox. Such anomalous productions are probably the fruits of Cow-pock matter, taken at a period when the pustule has lost its original character. Some practitioners take it on the fifteenth day; others boast, that they have used it, when it has been as thick as butter.

In addition to other intelligence of the progress which the vaccine inoculation is now making, I am informed by a gentleman who was desired to apply to me for Cow-pock matter for his friend in the country, that in consequence of his delay, which was occasioned by various unavoidable causes, his friend has lost several of his best families; and other gentlemen, who were provided with vaccine virus, were employed. This will act as a stimulus; and counteract the disposition which prevails in too many practitioners, to prefer the small-pox; the infection of which may be so easily procured, and so easily communicated, that, whatever detriment may arise to the public, it is much to be feared, the practice of inocu-

lating that disease, and spreading the pestilence, will be too long continued, unless the wisdom of the legislature should interfere.

Accounts of the successful establishment of vaccine inoculation at Hamburgh and Altona, have been received by Dr. Jenner from Dr. Mac Donald; whose practice has not been attended with a single failure, since he has strictly adhered to the rules laid down by Dr. Jenner.

Dr. Mac Donald inoculated himself with vaccine matter, in order to try how far the small-pox had rendered him insusceptible of the Cow-pox. The first attempt proved ineffectual; the second produced a pustule, perfect in its kind, but more evanescent than common. The third insertion of matter, which was unintentional, excited a pustule regular, both in appearance, and in duration.

To those who recollect the treatise published by Dr. Mac Donald, of which an analysis is given in a former part of this work, the genius and erudition which he has already displayed, will be the best pledges of the benefits likely to accrue to the world from his future labours.

Two other instances of the Cow-pox occurring after the small-pox, have been communicated to me by Mr. Pears, of Walworth; who has deserved well of society, by his indefatigable endeavours to ascer-

tain the just value of vaccine inoculation, and his ardent zeal to promote the practice.

One of the gentlemen in whom this disease took place, was Mr. Prior junr. of Clapham; who inoculated himself by accident. The case was seen by several medical men, who all considered it as a regular and absolute case of Cow-pox.

The other instance occurred to Mr. Dangerfield, who, as well as Mr. Prior, is a student at St. Thomas's Hospital. This case also Mr. Pears considers to have been a perfect case of Cow-pox.

Mr. Pears concludes his letter, with mentioning the result of an enquiry, respecting a report unfavourable to the practice. A surgeon in the Borough having informed him, that a child had died of the Cow-pox, he went immediately to the father; who, with much surprise at the enquiry, informed him, that the child had indeed been inoculated for the Cow-pox, but it had not taken effect. His wife refusing a second trial, it was, six months afterwards, inoculated for the small-pox, of which it died.

"This kind of result," says Mr. Pears, "has attended all my enquiries." It is much to be regretted, that such reports should be circulated without that previous examination, which humanity, justice and duty demanded.

Mr. Leighton informs me, that he has lately inoculated, with vaccine matter, a child who had been exposed to the variolous infection three days; and with success; the small-pox being prevented from taking place.

I mentioned in a former part of this work, a child of Mrs. Bence, in the Borough, whom, in consequence of extreme debility, I had three times inoculated in vain. He has since been in the country, and recovered his strength; and a fresh inoculation has taken place in both arms.

Dr. Jenner has lately printed, and distributed, a Memoir on the Origin of Vaccine Inoculation; of which he was induced to give a concise history, from observing, that those who only consider the subject cursorily, confound the casual Cow-pox with the disease when excited by inoculation.

From enquiries instituted by Dr. Jenner, it appears, that only a vague notion of the preventive power of this disease prevailed, till inoculation for the small-pox was rendered general, in consequence of the improvements in the practice, introduced by Sutton. The medical practitioners in his neighbourhood all agreed, that, although the Cow-pox sometimes prevented the small-pox, it was not to be relied on. This damped, but did not extinguish his ardour.

Proceeding in his investigation, he was so happy

as to ascertain, that the animal is subject to a variety of eruptions; and that these eruptions are capable of infecting the hands of the milkers; but that one species only possesses the specific power, of shielding the constitution from the small-pox.

Having surmounted this obstacle, one of far greater magnitude started up. Instances were not wanting to prove, that a person who had apparently gone through the disease, in common with others, when the true Cow-pox prevailed in a farm, was not rendered insusceptible of the small-pox.

This, like the former obstacle, gave a painful check to his fond aspiring hopes: but reflecting, that the operations of nature are generally uniform, and that it was not probable the human constitution, having undergone the Cow-pox, should in some instances be perfectly shielded from the small-pox, and in many others remain unprotected, he resumed his labours with redoubled ardour.

The result was fortunate: for he discovered, that the vaccine virus, like the variolous, at a late period, when it has undergone a change, is still capable of exciting disease; and that the inflammation and ulceration which it produces, when in that degenerated state, are as great, or greater, than what it produces, while it retains the specific property of protecting the constitution against the small-pox.

"Hence," says Dr. Jenner, "it became evident, a person might milk a cow one day, and having caught the disease, be for ever secure; while another person, milking the same cow the next day, might feel the influence of the virus in such a way, as to produce a sore or sores; and in consequence of this, might experience an indisposition to a considerable extent; yet, as has been observed, the specific quality being lost, the constitution would receive no peculiar impression." This, as Dr. Jenner remarks, will explain the cause of a common error, committed by those who inoculate for the Cow-pox. Conceiving the whole process to be so extremely simple, as not to admit of a mistake, they have been careless about the state of the virus. Hence, at one time they employ what never possessed, at another what has lost, the specific virtue; and frequently mistake the spurious pustule for one that bears the true stamp of the disease.

Dr. Jenner next informs us, that during his investigation of the casual Cow-pox, he conceived an idea of propagating the disease by inoculation; first from the cow, and finally from one human being to another. After relating the different series of experiments which he went through, with painful solicitude, and unwearied attention, of which he has already favoured us with an account in his treatise; he remarks, that the distrust and scepticism of medical men have now in a great measure disappeared.

"Many hundreds of them," says he, "from actual

experience, have given their attestations, that the Cow-pox proves a perfect security against the small-pox; and I shall probably be within compass if I say, thousands are ready to follow their example; for the scope which inoculation has now taken is immense. An hundred thousand persons, upon the smallest computation, have been inoculated in these realms. The numbers who have partaken of its benefits throughout Europe, and other parts of the globe, are incalculable: and it now becomes too manifest to admit of controversy, that the annihilation of the small-pox, the most dreadful scourge of the human species, must be the final result of this practice."

Should any one entertain a doubt of the validity of Dr. Jenner's opinions, because they have been approved by some practitioners, and met with a cool reception from others; let him recollect the prejudices and jealousies, which all innovations, and all discoveries in medicine, have to encounter. Let him recollect, how many persons in every profession are blinded by self-interest. Let him also recollect, that the practice proposed by Dr. Jenner, will not water the vales of medicine with streams rolling golden sands, nor open a mine of wealth; but cut off the Pactolus of the medical profession, and close a mine of wealth for ever.

It has been asserted by Hobbes, that Harvey, and Harvey alone, was so happy as to live to see his

doctrine universally received. But, however clear it now seems, and however level even with the most ordinary capacity, yet it was not admitted without a struggle.

A learned author alludes to the posthumous honours paid to this great man; which may be considered as an oblation to the dead, and an atonement for the neglect of living worth. He alludes to the orations pronounced in his praise, and the trophies erected to his fame. "Such," he observes, "are the means employed to eternize his memory. But Harvey has immortalized himself, by his writings on the circulation of the blood; the most important discovery that was ever made in medicine."

Harvey taught this doctrine in 1616, and published on the subject in 1628; but he seems to have cast his pearls before swine; for his doctrine was not admitted by any faculty, till the year 1650. So unwilling are mankind to own the merit of a great genius, during his lifetime; but they have no objection to own his merit after his death; and to strew the flowers of oratory over his tomb.

It is, however, necessary to remark, that the doctrine of the circulation of the blood, the most important discovery that was ever made, except that of which we now treat, was not universally received during the life of its author, notwithstanding the contrary has been asserted; nor was it admitted into the schools of medicine, but with reluctance.

His opinions were vigorously opposed by many physicians. Dr. Primerose began the attack; and grew pale with envy, like the Primeroses of the present day. He was seconded in his attack by a numerous phalanx. "In their eyes, Harvey was but a visionary; a dissector of insects, of frogs, or of serpents. The elder practitioners, too, supposed that nothing remained for them to learn; and were willing to die satisfied with their ignorance."

In spite, however, of all opposition, truth at length prevailed. Those who had ridiculed his opinion, as being new and contrary to reason, now changed their note, on finding that they could not prevent it from being favourably received by the public; and pretended it was extremely ancient. This is the fate of all great discoveries. First their authors are considered as visionaries, enthusiasts, and pretenders; and when their discoveries are incontrovertibly proved, envy and jealousy conspire to rob them of their renown, and to tarnish their glory.

As to the discoveries which constitute the subject of this essay, the preceding pages will enable the public to judge, to whom they are beholden for such an unspeakable advantage. Additional proofs are daily furnished, of the rectitude of Dr. Jenner's opinions, with regard to the nature, origin, and final effect of the vaccine preventive.

One instance has lately been witnessed by Mr.

Lawrence, an eminent surgeon at Cirencester; demonstrating the fact maintained by Dr. Jenner; that the virus originates from a noble animal, to whose heel many a human being will hereafter owe his life, as many a hero has already done.—Two fresh cases have also been lately communicated by Mr. Tanner, the veterinary surgeon, as further evidence on the same point.

The progress which the practice now makes, is extremely flattering; and we have abundant reason to believe, that all the mist of prejudice which remains in the public mind, is gradually vanishing before the light of reason and truth. Every hour, some respectable practitioner, who has opposed the new inoculation, becomes sensible of his error. One of that description, whose failures have been related at the Lycæum, having since witnessed the mischief arising from inoculation of the small-pox, called on Dr. Jenner; and was soon convinced that he had been deceived, as too many others had been, by spurious pustules; which he mistook for the genuine disease.

As a proof of the just esteem in which vaccine inoculation is held in this metropolis, the following physicians and surgeons have added their signatures to the testimonial in its favour. See page 297.

Dr. Pitcairn
Dr. Latham
Dr. J. Mayo
Dr. Hunter
Dr. Pemberton
Dr Frampton
Dr. Fearon
Dr. Cooke
Dr. Wm. Hamilton
Dr. Pinckard
Dr. Elliot
Dr. Babington
Sir Walter Farquhar, Bart.
Dr. Yelloly
Dr. Clarke
Dr. Poignand
Dr. Maton
Dr. Hooper
Dr. Bancroft
Dr. Hawes
Dr. Haighton
Dr. Boys
Dr. Walshman

SURGEONS.

Mr. Addington,
Mr. Aikin,
Mr. Anderson
Mr. Andree
Mr. Bliss
Mr. Brickenden
Mr. Thomas Brown
Mr. Bureau
Mr. James Burrows
Mr. Cairncross
Mr. Chamberlaine
Mr. Charlton
Mr. Clutterbuck
Mr. Coleman
Mr. Cribb
Mr. John Curtis
Mr. L. J. Curtis
Mr. William Curtis
Mr. Dale
Mr. John Davies
Mr. Douglass
Mr. Dowers
Mr. Dunn
Mr. Dyson

Mr. Foot
Mr. Murray Forbes
Mr. William Forbes
Mr. Foster
Mr. Gaitskell
Mr. Gardner
Mr. Gib
Mr. Thomas Goodwin
Mr. Grenville
Mr. Gristock
Mr. Harris
Mr. Hayes
Mr. J. W. Hill
Mr. Hogben
Mr. Hole
Mr. Hollings
Mr. William Holt
Mr. Home
Mr. Jeaffreson
Mr. Johnson
Mr. Jordan
Mr. Key
Mr. David Lewis
Mr. Lewthwaite
Mr. Luxmore
Mr. Massie
Mr. Maule
Mr. Messiter
Mr. Moss
Mr. O'Conner
Mr. Owen
Mr. James Parkinson
Mr. Paternoster
Mr. Perfect
Mr. Phillips
Mr. Platt
Mr. Porter
Mr. Ramsden
Mr. Reid
Mr. Ricardo
Mr. Seagram
Mr. Seares
Mr. Sharp
Mr. Thomas Sheldon
Mr. Shirley
Mr. Simmonds
Mr. Edward Smith
Mr. Joseph Steel
Mr. R. H. H. Steel
Mr. Strong
Mr. Turnbull
Mr. Tuson
Mr. Ware
Mr. William Warner
Mr. Wilson
Mr. Witham
Mr. Wood
Mr. Woodward
Mr. Wye
Mr. G. W. Young,
Mr. Jonathan Young

Application by letters having been made to many of the gentlemen whose names are before mentioned, it is only justice to the cause to state their replies.

Mr. Cairncross expresses his sentiments in the following terms:——" I have just now been favoured with your's; and, in answer, you have my most hearty concurrence, to add my name to any testimonial in favour of vaccine inoculation. I was amongst the first who introduced the practice into the city; and am happy to declare, with the most satisfactory and pleasing effects.

Mr. T. Goodwin gives me his full consent, to make use of his name in favour of vaccine inoculation; every patient in whom he used vaccine matter, having done well.

Mr. Andrews, of Greek-street, informs me, that he is decidedly in favour of vaccine inoculation; and that I am at liberty to make use of his name, in recommendation of that practice.

Mr. Dale says, he thinks it his duty to promote vaccine inoculation; and therefore wishes me to add his name to the testimonial which I publish in its favour.

Mr. Gardner, *of Clapham*, says, " he shall thank me if I will add his name to the testimonial; as every day seems to prove more, and more, the utility of the

practice. He declares, he has for some time been an advocate for the practice; and *nothing has happened*, that has in any way induced him to alter his opinion." The Clapham business is not yet forgotten.

Mr. Hole, of Highbury Terrace, Islington, observes, that he is in the constant habit of inoculating with vaccine virus; and approves of it very much.

Mr. Gaitskell, of Rotherhithe, declares he is so great an advocate for vaccine inoculation, from extensive experience, that he willingly permits his name to be added to the testimonial.

Mr. Jordan, of Bermondsey-street, says, he considers it an honour, to have his name introduced in so laudable an undertaking.

Mr. Brickenden, of Horsley-down, says, he is in the constant practice of vaccine inoculation; and fully convinced of its efficacy. He adds, "If the testimony of an individual can be of use, you are at liberty to affix my name."

Mr. Holt, of Tottenham, informs me, that he can with pleasure allow me to add his name to the testimonial. He has inoculated a considerable number with the vaccine disease; and since endeavoured to infect them with the small-pox; but to no purpose.

Mr. Forbes, of New-street, Hanover-square, says,

he shall be happy to have his name added to the testimonial in favour of vaccine inoculation. He says, he recommends it wherever he has an opportunity; and is convinced, that the cases of supposed failure have originated in wilful misrepresentation, or mistake.

Mr. Curtis, of Islington, says, the success of vaccine inoculation, in his own practice, induces him to wish it may become general; he therefore gives me full liberty to use his name.

Mr. Hayes, of Cleveland-street, says, he is very happy that he has an opportunity of giving his testimony in favour of vaccine inoculation; having every reason to believe, that it affords a security against the small-pox.

Mr. Bliss, of Hampstead, says, he should immediately have answered my letter, had professional avocations permitted; because he can, from much experience, bear ample testimony of the superior mildness of the vaccine inoculation; and of its rendering those who have been inoculated with it, perfectly secure from variolous contagion, provided care be taken to insert the fluid at a proper period of the disease.

Mr. Andree, of Hatton-street, informs me, that I have his free consent, to add his name to the testimonial in favour of vaccine inoculation; and that he

is of opinion, when the practice becomes general, the small-pox will entirely cease.

Mr. Owen, of Chancery-lane, says, he shall be glad to have his name added to the testimonial in favour of vaccine inoculation; and that he is decidedly in its behalf, in consequenee of two years experience, attended with the most happy effects.

Mr. L. J. Curtis, of Islington, says, you have my free consent, to add my testimony in favour of vaccine inoculation.

Mr. Curtis, of Whitechapel, says, "From every circumstance that I have met with in the vaccine inoculation, I cannot speak too highly of it; and you are quite at liberty to mention my name, in any testimonial in its favour.

Mr. Maule, of Edmonton, writes me word, that he has not the least hesitation in subscribing in favour of the new practice.

Mr. Brown, of Pimlico, informs me, that he has not the least objection to have his name added to the testimonial in favour of vaccine inoculation. He thinks it a most fortunate and efficacious discovery; having practised it with great success.

Mr. Kilpin, of Great Russell-street, considers himself as not having had sufficient practice in the vac-

cine inoculation to form a decisive opinion; but as far as he has had an opportunity of judging, he thinks it in all respects preferable to the small-pox.

Mr. Platt, of Bride-court, New Bridge-street, says, What he has witnessed of vaccine inoculation inclines him to form so favourable an opinion of its advantages, that when an occasion presents itself, he never fails to recommend it.

Some gentlemen informed me, that they had not seen enough of the practice, to enable them to judge of its merit; and one sent me word, that he had paid no attention to the subject. One gentleman thinks the small-pox more secure; but does not say that he has ever seen the Cow-pox.

It is no want of candour to affirm, that those who are hostile to vaccine inoculation, are total strangers to it; those who are doubtful, are almost total strangers to it; and I defy the whole world, to produce one single instance of a person that has had any experience in the disease, who is not a decided friend to the practice.

Mr. Clutterbuck, of Walbrook, chearfully gives his testimony in favour of vaccine inoculation. He has seen one case of general erysipelas terminating in anasarca, and nearly proving fatal; which was, to all appearance, excited by this inoculation. It must, however, be recollected, we have no evidence to

prove that the disease was really occasioned by the Cow pox. It probably was the scarlet fever; which has been epidemic; and which frequently occasions anasarca.

A physician of one of the first hospitals in London, when he signed his name to the testimonial, informed me that he complied the more readily with my request, because the practice of vaccine inoculation was the only improvement in physic, which had been made in his time.

Mr. Key, of Southwark, says, "when I commenced vaccine inoculation, it was my intention to have published the result of my practice: but in 253 cases, under my direction, there was so little variety, and every circumstance was so favourable, that my adding my name to any testimonial in favour of the new practice, will be saying every thing that is requisite.

"Indeed, so much has been written, that unless something out of the usual way should occur, if every practitioner will annually register his testimony, it will be sufficient to impress upon the public the importance of the obligation due to Dr. Jenner.

"You have, therefore, my permission, to put my name to any treatise in favour of the disease."

Mr. Cribb, of Holborn, readily contributes his

signature, in support of vaccine inoculation; as preferable to the variolous, and a perfect security against variolous contagion.

Mr. Ware informs me, that he cannot have any objection to the introduction of his name, in the testimonial in favour of the vaccine inoculation; his own child having lately gone through the disorder in the most easy and regular manner; and being, as he trusts, perfectly secure against the attack of the small-pox.—Mr. Ware means, however, to have him inoculated for the small-pox, when he is two years old.

No one who is so happy as to be acquainted with Mr. Ware will doubt, that he will observe every precaution, which a sense of paternal duty can dictate; at the same time it is proper to prevent the public from being deterred from this inoculation, by their supposing, that any one of the principal inoculators for the vaccine disease admits the necessity of this precaution. Persons inoculated more than two years ago, have an unrestrained intercourse with those labouring under the small-pox, as often as an opportunity offers; of which those who entertain doubts may at any time have ocular demonstration. The inoculated Cow-pox has in one case borne the test of near five years; and the casual Cow-pox has borne the test of upwards of fifty years; and given substantial proof, that the security which the vaccine fluid affords, is not impaired by time.

Mr. Wye, of Mortimer-street, says, he has not the slightest objection to his name being added to the testimonial in favour of vaccine inoculation; and, as a proof of his perfect confidence in its efficacy, he intends, in a few days, to inoculate with it his only child, who is now only eight days old.

Mr. Ricardo, of Bow, informs me, that from the slight experience he has had of the vaccine inoculation, during the short time he has been in practice, he is decidedly in favour of it; and, that I am at liberty to add his name to the testimonial.

Superficial reasoners may consider such a signature as of little weight in the scale of our argument; but surely the superiority of that practice must be evident, which can so soon make a convert of a professional man; and induce him to stake his reputation on the extreme probability of its success.

Mr. Chambers, of Paddington, informs me, he has been so successful in variolous inoculation, that he has not been tempted to make a trial of the substitute proposed by Dr. Jenner. He confesses, however, that he has known several medical men of acknowledged abilities, and great assiduity in the line of their profession, who had to lament the losses they had met with in that practice.

Mr. Chambers had received authentic information from a native of Dorsetshire, at the time when

Dr. Jenner first published his account of vaccine inoculation, that an inoculator in that county both taught, and verified by his practice, that those who had undergone the Cow-pox need not be inoculated for the small-pox; since the former disease was a sure preventive of the latter.

Mr. Warner, of Victualling-Office-square, says, "In answer to your note, which I received this morning, you are at liberty to add my name to the testimonial. At the same time, I wish every success to the inoculation, which it so highly merits."

Mr. Hollings, of Mount-street, informs me, that he will with great pleasure subscribe to the testimonial in favour of vaccine inoculation.

Mr. Douglas, of Bedford-square, informs me, that all his patients who had been subjected to vaccination having gone through the disease without any unfavourable symptoms, he is decidedly for the practice; and not without hopes, that the small-pox may in time be expelled from the kingdom.

Mr. Seares, of Half-moon-street, says, I am now so fully convinced of the good effects of the vaccine inoculation, that I cannot hesitate a moment in subscribing to it.

Since writing the above, I received a letter from Dr. Fearon, Fellow of the College of Physicians; in

which he says, he is happy in being able to bear testimony to the truth of my assertion; and readily assents to my request, that his name shall be added to the testimonial.

Mr. Phillips informs me, that as he approves of vaccine inoculation, he can have no objection to his name being added to the testimonial.

Mr. Ramsden says, Having hitherto seen no cause to doubt the efficacy of the vaccine inoculation, he cannot object to the adding of his testimony of its success; as far as his own experience has enabled him to judge of it.

Mr. Forbes, of Camberwell, says, It gives him much pleasure to inform me, that his experience of the vaccine inoculation fully justifies him in saying, it is a most invaluable discovery; mild in its nature, and a complete preventive of the small pox, where the infected part has had the true vaccine character.

Mr. Forbes adds, he most sincerely wishes the Cow-pox was infectious; that neither the prejudices of the people, nor the objections made by many medical men, who are still ignorant of its excellence, might prevent the public at large from enjoying the blessing of such a substitute for the small-pox.

Mr. Lewthwaite returned this answer; that his experience in the vaccine practice has hitherto been

limited, merely from the prejudices of his patients; but, as far as his opinion can have any weight, I am at liberty to place his signature among the rest, as an advocate for the Jennerian system of inoculation.

Mr. Bureau informs me, that, in consequence of having both heard and read a great deal about the vaccine inoculation, he had been induced to try it; and it is with pleasure he can assert, his own experience fully confirms all that he had before heard, or read upon the subject.

Mr. Bureau has so high an opinion of it, that he now recommends it wherever he can, in preference to the variolous inoculation. He is aware, that some medical men oppose this practice; but if it continues to prove so successful, as it hitherto seems to have been, and he thinks there is no reason to suppose otherwise, he hopes that, in due time, it will entirely annihilate that dreadful disease the small-pox.

Mr. Turnbull informs me, that he can have no objection to my using his name in any testimonial in favour of vaccine inoculation.

Mr. Reid, of Chelsea, says, he certainly can have no objection to my adding his name to the testimonal in favour of a practice, which he has been in the habit of following for a length of time; and against which, according to the best of his knowledge, and after he

has taken some trouble to ascertain the truth, no circumstance can be produced, that can lessen the reputation it has so deservedly obtained.

Mr. Perfect, of Wandsworth, authorises me to say, that, as far as his observation goes, the Cow-pox has decidedly the preference over the small-pox, as a safer and milder disease: and, as doubts may still be entertained by some, whether it is to be relied on as a substitute for the small-pox, he mentions one instance, which occurred in his own practice.

He was desired to attend a young gentleman, who had the small-pox extremely full, in the natural way. Finding that his brother had not had the disorder, and reflecting on the danger of variolous inoculation at that period, the weather being intensely hot, he recommended inoculation with vaccine matter; which was complied with.

After the fifth or sixth day, the patient was permitted to be frequently with his brother; without suffering the smallest inconvenience from the small-pox.

Mr. Coates, of Howland-street, says, he is sorry he cannot permit his name to be added to the testimonial. Though he has no doubt of the facts related by Drs. Jenner, Pearson, &c. nor of the conclusions from them, yet he has not seen enough of the disease, to speak from his own knowledge. He

was so obliging as to inclose a letter from a friend at Maldon, contradicting the false report which had appeared in a morning print, concerning vaccine inoculation at that place. This is already refuted in the present work; by the authority of the medical practitioner, under whose observation the cases fell, which gave rise to that report.

Mr. Woodward, of Whitechapel-road, gives me full permission to insert his name in the testimonial.

Mr. Dowers, of Mile-end, permits me to add his name to the testimonial in favour of vaccine inoculation; in which he has had considerable practice, which has fully answered his most sanguine expectation.

In order to diffuse the benefits of this most excellent discovery as much as possible, Mr. Dowers has repeatedly offered to inoculate all persons who were willing to accept of his proposal, free of expense; and has taken considerable pains, to induce the poor in his neighbourhood to permit their children to be inoculated. But, he adds with concern, from the great prejudices entertained, very few have availed themselves of his offer; although the small-pox has lately been very fatal in that quarter.

Dr. Haighton informs me, that he has not the smallest objection to bear testimony to the advantages of vaccine inoculation.

Mr. Witham expresses his sentiments in the following manner. "Though my practice in vaccine inoculation has not been very extensive, what little I have seen has tended in a great measure to confirm the very sanguine encomiums of its warmest admirers.

"I shall therefore be glad to have my name subscribed to the testimonial in its favour; and feel proud, that my little bark may, with others more illustrious,

"attendant sail,
"Pursue the triumph, and partake the gale."

Mr. Strong, of Chiswell-street, authorises me to say, that he is so convinced of the mildness and efficacy of vaccine inoculation, that in all cases, where he can prevail on the parents, he shall continue to inoculate with vaccine, in preference to variolous matter.

Mr. Hill, of Great Tower-hill, informs me, that he has inoculated a number of patients with vaccine disease; and afterwards subjected them to the test of variolous matter, without any effect; except a little inflammation in a few cases, which in a short time disappeared. He therefore adds, that with regard to the testimonial, I have his "most hearty concurrence."

One gentleman professes to have no *material ob-*

objection to the new practice: yet he remarks, that it would be more satisfactory to him, "if the failures of infecting were fewer; if the *vaccine matter* were more *accessible* to the generality of practitioners, and if such *unpleasant appearances* as have sometimes occurred, had not transpired."

I coincide in this gentleman's opinion, that it is always desirable to follow a practice, which is void of difficulty, and of danger. That variolous inoculation is not such, we all know. That vaccine inoculation is such, is well known to those who understand it. I therefore regret, that it has been practised by so many, who have no pretensions to that character; and that their evil report has prejudiced this ingenious practitioner against it.

I pledge myself, however, to prove, that all his objections are unfounded. Infection is not so difficult as he imagines. Any liberal practitioner will at any time supply him with matter; and any inoculator who is worthy of the name, will give him the most incontestible proofs, by ocular demonstration, that if unpleasant appearances occur in vaccine inoculation, the fault is either in the patient or the practitioner, and not in the practice

In one part of his letter this gentleman contends, that the superiority of the new inoculation over the variolous, is somewhat over-rated; which all those who have seen it practised in the most approved way,

think impossible; a point which this gentleman, as he justly observes, cannot be quite competent to decide, since he has never seen a single case of any kind whatever.

This, it seems, is for want of opportunity; which is rather surprising, since he lives in a town, in which at least ten times more have been inoculated with the Cow-pox, than in any other in the whole world.

It is also a little surprising, that any one should condemn unseen, a practice which is so much approved of by those who have seen it; and on which higher encomiums have been lavished, than on all the other improvements that have ever taken place in the whole circle of medicine.

This gentleman gives a singular reason for thinking the vaccine inoculation somewhat over-rated; which is, that the other species is preferred by the most *ill-informed* part of the community, and by no others. He says, he did not attempt to influence such persons in favour of vaccine inoculation; well-knowing, how ineffectual such attempts generally are.

In answer to this observation, I beg leave to assure the gentleman, that if the attempts of medical men, to convince those who apply to them of the superiority of the new practice, have been ineffectual, they must have been weak and futile; and made with a cold in-

difference. This I am bound to say, in justice to the public; having never failed to convince those who applied to me for inoculation, of the superiority of that practice, in a single instance, since it was first introduced.

It is a little too much in this gentleman to insist, as he does in one part of his letter, that he "must not be supposed to have any objection to the new practice;" since, in the same letter, he states three objections in the most explicit terms.

As a proof, that all practitioners have not found people in general so prejudiced against vaccine inoculation, nor the practice so unworthy of their regard, as the gentleman before alluded to fancies it to be,—I shall adduce counter evidence, from the letter of an eminent surgeon; who, with that modesty which often accompanies superior merit, objects to having his name brought much before the public.

This gentleman says, "*Although he is decidedly of opinion, that a person having had the Cow-pox, is perfectly secure against the infection of the small pox, and that the latter, even by inoculation, is a much more serious disease than the former*, he notwithstanding begs to decline signing the paper sent by Mr. R. *partly because he believes there are now very few prejudices remaining against the Cow-pox*, but principally because he is averse to having his name much before the public."

There are others, not altogether unacquainted with the merits of vaccine inoculation, who would not come forward, and sign a testimonial of this sort, to save mankind from perdition; because it would degrade their dignity. Let such men learn from a Pitcairn, a Latham, a Vaughan, a Farquhar, a Wathen, a Sharp, and a Cline; who stoop from the highest pinnacle of the profession, to proclaim their sentiments to the world, and to promote the practice.

Mr. Shirley, of Islington, informs me that I have his ready permission, to add his name to the testimonial in favour of vaccine inoculation.

Mr. Steel, of Tower-hill, says, from the experience which he has had of vaccine inoculation, he thinks highly of it; and permits me to add his name to the testimonial in its favour.

Mr. Dunn, of Fleet Market, is willing that his name should be added to the testimonial in favour of vaccine inoculation; being satisfied of its efficacy in preventing the small-pox.

Mr. Sheldon, of Tottenham-court-road, informs me, that he is happy to add his testimony to the safety and utility of vaccine inoculation. He adds, that although he has in general inserted variolous matter, after the patients had gone through the Cow-pox, yet that operation has had little more effect, than what would be produced by a common scratch.

Mr. Johnson gives the following decisive testimony in favour of the new practice. "For the last two years I have been an advocate for vaccine inoculation; and the result of my practice induces me to believe, that ere long, all mankind will bow down with gratitude and veneration, at the shrine of Jenner."

Exclusive of those already mentioned, a considerable number of professional men, of every denomination, in this great metropolis and its vicinity, have testified the warmest approbation of the practice.

Among the most distinguished, are those who form the medical establishments of the Small-pox Hospital, and of the Vaccine Institution. The names of such of those gentlemen as are not subjoined to the testimonial, I beg leave to recapitulate in this place.

In the Small-pox Hospital vaccine inoculation may boast two zealous advocates, Dr. Woodville, and Mr. Wachsel.

In the Vaccine Institution, besides the celebrated surgeon, whose name is affixed to the testimonial, it is honoured with the support of Dr. Pearson, Dr. Nihell, and Dr. Nelson; Mr. Keate, Mr. Payne, Mr. R. Keate, Mr. Gunning, Mr. Carpue; Mr. Brande, Mr. Rivers, Mr. E. Brande, and Mr. J. Lewis.

But, it is unnecessary to multiply the names of

individuals, who recommend this beneficial practice, when it appears, by the preceding pages, and by various other channels of information, that it is countenanced by the professors in our Universities, and by the most eminent physicians and surgeons in Great Britain.

Mr. Lewis, of Budge-row, having related a case at the Medical Society, which tended strongly to confirm what is here asserted, I procured a statement of the facts, which are as follows.

Mr. Lewis inoculated a child for the Cow-pox; who went through the different stages of the disease, in a manner that gave him perfect satisfaction. The parents, who only knew the disorder by report, having read in the newspapers reports which were very probably paid for, in order to prejudice the public mind against this useful discovery, wished to have the child inoculated with variolous matter.

She was therefore conveyed to a house, where a child was, who had a full eruption of the small-pox; where every mode that could be devised was tried, in order to infect her, but in vain. The children sat close together; frequently taking each other by the hand, and kissing each other, full half an hour. During this time, Mr. Lewis made six or seven punctures with an armed lancet; and afterwards smeared the part over with limpid fluid, fresh from

the arm, and in the most active state that it possibly could be met with.

The next day, the place appeared inflamed; and continued, on the third day, to have the appearance of the inoculated small-pox. On the fourth, it seemed to be arrived at maturity; on the fifth, the pustule had burst; and in two days more, there was not a vestige of this local disease left. There was not the least sign of any constitutional affection.

Previous to this, Mr. Lewis's own child, after undergoing vaccine inoculation, was carried to a house, where a child was blind for above a week, with the natural small-pox; and exposed to the fullest infection, without receiving any disease in consequence of that exposure.

The following letter from Mr. Simpson is another valuable addition to the facts already recorded, in the course of this volume.

"The salutary effect of the Cow-pock matter on the human body, as a preventive of the small-pox, is not the only good that will probably arise from the general use of this discovery. In proof of this idea, a case occurred to me last year, so strong, and so conclusive, that I send it to you as a new fact; to be added to those which you have already collected.

"Mr. G——'s child had a very obstinate erup-

tion, of the crusta lactea kind; but more violent than it is commonly met with. It covered the head and face; and the greater part of the body. It withstood the effects of the usual remedies; and the little creature was really disgusting to look at.

"The time arrived, at which the parents usually had their children inoculated. I advised the Cow-pock; to which at first they objected, from a fear of aggravating the disease; but they afterwards consented, when I assured them that such an event was not probable, and that it was not impossible it might remove it.

"The child was inoculated with Cow-pock matter; and it was extremely gratifying to me to observe, that as soon as the constitution was evidently affected, the disease of the skin began to disappear; so that by the time when the vaccine action subsided, the whole of the eruption had peeled off, in the form of very fine scales; or was brushed off like powder. Not a particle of medicine was given; nor any external application used. I have the pleasure to say, there has been no return of the complaint; although ten months have elapsed.

"Several instances have occurred to me, in which the general health of weakly children has been very much improved. I have not met with a single unpleasant circumstance in my practice, except the frequent failure of infection."—This objection to the

new practice can only be urged, where there is no opportunity of procuring early matter; and inoculating from arm to arm.

Having learned from Mr. Simpson, that Mr. Jones, an eminent druggist on Fish-street-hill, could communicate a valuable case to me, I waited on that gentleman; and was not disappointed in my expectation.

Mr. Jones informed me, that above a year and a half ago, he had his child inoculated with Cow-pock matter procured from Dr. Jenner. In consequence of the prejudices which prevailed, he deferred having her put to the test, till after the expiration of a year and a half. He then sent her to the house of his gardener, at Enfield; whose children were about to be inoculated for the small-pox.

With them she ate, drank, slept, and played; and frequently amused herself with picking the pocks and the scabs off from their hands; yet escaped infection. A local pustule, indeed, arose on her arm; but it disappeared about the sixth day.

In the country, the new inoculation continues to be propagated; and the benefits of the Jennerian discovery spread far and wide. Many respectable individuals, not of the medical profession, have given proofs of their philanthropy on this occasion. The Lady of Thomas Kingscote, Esq. of Hinton, near

Alresford, to whom Dr. Jenner has the honour of being related, has distinguished herself in that laudable undertaking; and rescued 850 human beings from the ravages of the small-pox, by her benevolent exertions. Several of Mrs. Kingscote's patients have since been exposed to the effluvia of the natural small-pox; but they resisted infection.

Among those whom I submitted to the test of variolous inoculation, in the early period of the practice, were two children of Mr. Dawson, No. 20, Upper Cleveland-street. These have since been frequently exposed to the natural small-pox, and remained many hours together, in apartments with the dying and the dead; but, although exposed to such a severe trial, they escaped infection. I have inoculated about 20 children in the same house, many of whom have undergone a similar exposure.

The two children of Mr. Cowcher, in South Moulton-street, have several times associated with other children covered with the small-pox; and afforded additional proofs of the protection imparted by the Cow-pox.

I inoculated a child of Mrs. Bates, No. 9, Chandler-street, Grosvenor-square, with vaccine matter; who went through the disease in a favourable manner. Since that time, another infant, whom she neglected to have inoculated, fell a victim to the small-pox.

The former was its constant companion; yet suffered not the least inconvenience.

I inoculated a child of Mrs. Collins, in the Grotto, Paddington-street. Wishing to put the vaccine preventive to as severe a test as possible, she carried the child to a woman loaded with the small-pox; who, besides every other means which her ingenuity could suggest, breathed on the child, telling him, he would have the small-pox now or never. If this prediction was true, the infant is safe.

I inoculated two children of Mrs. Ringer, in Paddington-street. Since that period, several persons in the house have had the small-pox; but the child who had undergone the Cow-pox escaped infection.

Three children of Mr. Naish, at No. 12, Gibraltar-row, St. George's-fields, whom I inoculated for the Cow-pox in August 1800, have several times played with children labouring under the confluent small-pox, without receiving the least detriment.

I am informed by the mother of these children, that two children of one of her neighbours are at this time ill of the small-pox, and one of them blind with it; who were pronounced to have had the disease last year, by several medical men. This shews, how cautious every practitioner ought to be, in forming a decisive opinion on that subject.

A child of Mr. Allen, at No. 11, King-street, Golden-square, whom I inoculated with the vaccine disease, has since been nursed at a house, where three children had the small-pox at the same time; and constantly associated with them, without catching that distemper.

A child of Mr. Castell, at No. 32 in the same street, whom I likewise inoculated with the Cow-pox, has been carried by its mother to several places where the small-pox was; and every effort has been tried, in order to infect it, but in vain. Three other children in the same house, have repeatedly been put to the same test.

A child of Mr. Archer, in Beak-street, Golden-square, has many times been submitted to a similar test; and with similar success.

I inoculated two children of Mr. Price, at No. 30, Swallow-street, with vaccine virus. The small-pox has since been twice in the house, without producing the least ill consequence. The last time it broke out, two children were brought to me from the same house, to be inoculated for the Cow-pock. The first was inoculated on the third day after it appeared in the house; the other on the sixth; to both of whom the vaccine pustule proved a complete shield from variolous contagion.

A daughter of Mr. Van Vivian, of No. 6, Castle-

street, Leicester-square, who had undergone the Cow-pox, was carried to the same house by her mother; who tried to infect her with the small-pox, from a child labouring under the confluent disease; but all attempts were fruitless.

A child of Mr. J. Clifford, No. 292, Oxford-street, whom I had inoculated several months before, was put into bed with one who had the small-pox in the most severe manner; and affords another satisfactory proof of the advantage of the new practice.

I have lately seen another person, who has derived security from the small pox by means of the casual Cow-pox. Mrs. Bolter, of St. George's-market, Grosvenor-square, caught the Cow-pox by milking twenty-five years ago. Four years after, she was twice inoculated in each arm with the variolous matter, but to no purpose. Ten years ago, her son had the small-pox by inoculation; and she was in the house with him the whole time. Four years ago, her sister and one of her children died of that disorder; and four other persons came and resided at her house, during the whole time they were under inoculation of the small-pox; but though constantly with them, she still resisted infection. Fifteen months ago, she went into an apartment where the small-pox was. A year ago, her child at the breast was inoculated for the small-pox; and had the disorder so severely, as to be blind nine days. She continued suckling it the whole time, though the stench was almost intolerable. Some

months ago, a relation lost a child by the small-pox. During the whole course of the disease, Mrs. Bolter was five or six times a day in the apartment, and a witness to the distressing scene, without suffering from the baneful contagion.

A child of Mr. Saunders, No. 1, Carnaby-market, whom I had inoculated some months before with the Cow-pock, was carried to a house where two children were ill of the small-pox. The father of the child tried to infect her by every means possible; putting her into the bed with the child labouring under the small-pox many times, but all to no purpose.

The following vaccine patients have also been exposed, and most of them several times, to variolous contagion.——A child of Mr. Smith, No. 27, Half-Moon-street, Piccadilly; five children of Mrs. Hall, Winter's-court, Southwark; a child of Mr. Decan, Brooke's-court, Tottenham-court-road. The last was carried repeatedly to a house, where an infant lay dead of the small-pox

The undermentioned have also passed the same ordeal, without suffering the least injury: a child of Mr. James, Little Charlotte-row, Southwark; —— Phipps, at Mr. Ross's, Hungerford-market; a child of Mr. Ramsden, No. 4, George-street, Asylum; two children of Mr. Jakeman, No. 56, King-street, Golden-square; and a child of Mrs. Corderoy, at the same house. The last has been very much exposed;

as have the following; a child of Mr. Barrett, of George-street, Asylum; one of Mr. Spiller, in Marshall-street, London-road; one of Mr. Baggs, and one of Mr. Pickburn, in the same street. The last went to a house where the confluent small-pox was, every day during the continuance of the disease.

The child of a brother of Mr. Pickburn, No. 130, Whitechapel-road, and one of Mr. Allmond, No. 281, High-street, in the Borough, have also given repeated proofs, that those who have had the Cow pox, may be exposed to the infection of the small-pox with impunity.

In the course of last summer, I inoculated three children of Mr. Hart, in Marshall-street, Carnaby-market, when the small-pox was in the house; and the fortunate event with which those cases were attended has already been recorded. Some time ago, the small-pox again broke out in the house; and I was desired to inoculate another child of Mr. Hart, then only a month old, for the Cow-pox; which was done with the usual success; the small-pox was prevented.

I have now a patient with a co-existence of the Cow-pock and the measles, at No. 11, Orange-court, Swallow-street. The measles appeared on the eighth day of vaccine inoculation; and both diseases proceeded regularly in their course; the vaccine pustule on each arm being surrounded with a complete areola.

Another memorable case of the casual Cow-pox, which has afforded a permanent protection against the small-pox, has lately come to my knowledge. Jane Brent, No. 24, Tottenham-place, Tottenham-court-road, had the Cow-pox 38 years ago, when she lived at Dulverton, in Somersetshire. She was twice inoculated for the small-pox, but in vain, by Mr. Lee, surgeon of that place.

About ten years ago, two of her children had the small pox; and she attended them the whole time. Since that period, she has suckled two nurse-children labouring under that disorder; yet she suffered not the least inconvenience. She has also been in the habit of attending the sick as a regular nurse, and frequently been exposed to the full force of variolous infection; but always escaped unhurt.

November 4, 1800, I inoculated two children of Mr. Church, in Crown and Thistle-yard, Swallow-street. The small-pox was at the next door; and one child died of that disorder. The two children who had been inoculated with the Cow-pox were exposed a considerable number of times to the full infection of the small-pox; without receiving the least injury. Another child of the same family is now under inoculation of the vaccine disease.

Every day furnishes additional proofs of the mildness of the vaccine disease, and of its decided superiority over the small-pox. Of this, it is observed

by Mr. Phillips, of Painswick, in the Medical Journal for June, 1801, from the mass of evidence brought forward by many of the most respectable professional characters, not only of this, but of other countries, there is no room left for doubt in any unprejudiced mind. Mr. Phillips has inoculated above thirty persons, without meeting with one alarming or troublesome case.

In the Medical Review for May, I announced the introduction of the new practice into Jamaica. In the same work for June, Mr. Bliss of Hampstead, communicates additional intelligence, of the utmoft importance, on the same topic. A letter from Mr. Rooke, dated, Savannah la Mar, 16th March, 1801, states, that near ten thousand persons in that island have already been successfully inoculated with the vaccine virus; and that he was then on an excursion into the country, with a view of extending its benefits.

His introduction of this mild disease, says Mr. Bliss, was peculiarly providential; for the negroes on Mr. Ellis's estate, where he resided, were at that time surrounded with the small-pox; and, of a thousand, not twenty had undergone the variolous contagion.

Mr. Rooke says, the opposition which he met with, at its first introduction, has nearly subsided; and he is countenanced in his propagation of the

practice, by some of the principal members of the House of Assembly in that island.

In the same number of the Review is a communication from Mr. Pears, refuting certain false reports, the most important of which are already refuted in the course of this work. He justly observes, that the cases which have given rise to those unfavourable rumours, when properly enquired into, instead of bringing discredit on the practice, have served most effectually to recommend it, and established it on a firm basis.

Dr. Jenner has received a letter from Mr. Chester, a surgeon in Jamaica, dated Goshen, St. Elizabeth's, April 17, 1801: stating, that vaccine matter, which he had received from Dr. Jenner, failed. Of so much importance was this antidote, in the opinion of Mr. Chester, that he had it in agitation to come to England; and, by successive inoculations during the voyage, on his return, to ensure the introduction of a preservative so ardently desired.

He was, however, so fortunate as to obtain recent matter; and has inoculated near a thousand, with the greatest success. He says, he is highly indebted to Dr. Jenner, for many fervent prayers in his favour.

Mr. Addington, who now resides in London, has published a second edition of his treatise; in which

he candidly acknowledges, that he is at length convinced, no pustular eruptions take place in vaccine inoculation; unless from contamination with variolous matter.

As to the genuine disease, if disease it can be called, on the third day it resembles a flea bite, on the sixth a crystal; on the tenth a pearl, on the twelfth a rose;—a rose without a thorn!

The vesicle which it displays, may be considered as a gem of inestimable value; and the fluid which it contains, a precious balm.—How enviable is the lot of that man, who has put the world in possession of such a treasure! It is to himself an inexhaustible source of happiness; and to the land which gave him birth, an eternal monument of glory.

By a letter from Dr. Marshall, dated, Palermo, 17th April, 1801, I am informed, that the Jennerian inoculation in that city is attended with its usual success; and is received not only without prejudice, but with open arms. Apartments for Dr. Marshall have been fitted up in the former College of the Jesuits; where the poor are inoculated gratis.

Dr. Marshall's observations all terminate in one point, namely, the exact uniformity of the disease with its appearance in England. Not a single pustule has occurred, except that on the inoculated part, in any case under his care.

The deaths occasioned by the small-pox in Palermo, last year, were calculated at eight thousand; but this year it has not hitherto shewn itsslf; and Dr. Marshall hopes, that from the great attention paid to the vaccine inoculation by the government, the dreadful ravages of that disease will in future be entirely prevented.

Dr. Bouttatz, a native of Moscow, who has distinguished himself by his inaugural thesis at Göttingen, on phosphorus, and by a prize dissertation on the same subject in this metropolis, which was so fortunate as to obtain the gold medal from the Medical Society of London, has sent me the following paragraph; taken from a Hamburgh paper of May, No. 84, "The Emperor of Germany has given silver medals to sixty parents in Alsace; who have consented to have their children inoculated for the vaccine disease."

From Mr. J. Ring, I learn, that some cases have lately occurred at Rochester, which ought to be hung up in terrorem. A practitioner inoculated a child with what he called Cow-pock matter. As soon as the arm rose, he inoculated five others with the matter; and charged two lancets with the same for another medical man. A day or two afterwards, the child had a number of pustules; which did not turn till the seventh day. All those who were inoculated with the matter had the small-pox, as might well be expected; and one of them fell a victim to this unfortunate mistake.

By the Recueil Periodique, published in February, 1801, we are informed, that the Medical Society at Paris had appointed a committee, who were to repeat experiments in vaccine inoculation. "This discovery," they say, "which has hitherto presented the happiest results, and promises in future the most powerful resources, for the annihilation of the most dreadful of all diseases, cannot be too often recalled to the attention of medical men, and of the friends of humanity. Both the one and the other will find the committee of vaccine inoculation, established by the society, always disposed to correspond with them; and to convey to them vaccine matter, with such instructions as they may require. Letters and parcels are to be addressed, post paid, *Au rédact. du Rec. Périod.*—The committee will inoculate gratis, at the place where they hold their sessions, in the Louvre."

In the same work for April 1801, a French translation of Mr. Aikin's treatise on vaccine inoculation is announced; and an account is given of two original publications in French, on the same subject.

The first is entitled Historical and Medical Researches concerning the Cow-pox; by Dr. Husson, of the Library of the School of Medicine at Paris, and member of the Medical Society in that Metropolis.

The editors of the Recueil observe, that "this work, which an enlightened public will no doubt dis-

tinguish from the number of insignificant productions which have appeared on the subject of the Cow-pox for some time past, is divided into three chapters.

"In the first, the author presents us at great length with the history of the disease, from the fruitful observation of Jenner, and the useful labours of this physician, to the formation of the Medical Committee of Paris, and of that of Rheims; whose attempts, although they were for a while arrested by the obstacles which the malignant and retrograde always oppose to modern institutions, have since been resumed with great activity, and furnished the most happy results; which have been honoured by the express authority of the Minister of the Interior.

"The objects of the second chapter are, the description of the disease, the accidental circumstances that occur; its advantages, the mode of inoculating, the preservation of matter, &c.

"This treatise is accompanied with engravings, exhibiting the appearances of the disease, on the different days, with the greatest fidelity; and the subject of the spurious Cow-pox is treated with the same accuracy and care."

Dr. Husson gives a comparative statement of the advantages of the small-pox and of the Cow-pox; in which he asserts, that the Cow-pox is, of itself, never attended with danger; and never produces any alarm-

ing symptom. He also asserts, that no one has hitherto died from the mere effect of the Cow-pox.

After enumerating the various other well-known advantages arising from the Cow-pox, Dr. Husson mentions different instances, in which vaccine inoculation had proved a remedy for other diseases. One was a case of intolerable head-ach, of several years standing; which had been considered as incurable; the other a case of scrofula, cough, and shortness of breath. All these symptoms, we are informed, have totally disappeared.

The third chapter, we are told, in which the author answers the objections against vaccine inoculation, is written with all the warmth and eloquence of a true philanthropist; who feels an anxious desire, to see the benefits of so useful a discovery as that of Dr. Jenner spread; and glows with that indignation, which the base efforts employed to oppose the propagation of this discovery, must necessarily inspire.

Such is the work of Dr. Husson, who feels, as every honest man must feel, indignation at the base ingratitude shewn to Dr. Jenner; and at the reluctance with which proofs of the vast advantage of his discovery are received by some persons; proofs, which are sufficient to satisfy all but the prejudiced, the jealous, the superannuated, and the self-interested, —and to produce conviction in every enlightened and liberal mind.

The next article in the same periodical collection is an account of a work entitled, The Theory and Practice of Inoculation of the Cow-pox, &c. by Dr. Ranque, Member of the Medical Society of Paris.

This gentleman, whose zeal and devotion for the propagation of the new practice merit every eulogium, went to reside at Bourdeaux; in order to naturalize vaccine inoculation in that city. His work, according to the French Reviewers, instead of being what it professes, is little more than a superficial instruction concerning the practice; and a compilation without sufficient arrangement.

Some ill executed plates, representing, or rather misrepresenting, vaccine pustules at different periods, may be had of the bookseller in Paris who sells this pamphlet; we have, however, no occasion to cross the seas for such a commodity; since our own country produces it in great abundance. Nothing has contributed more to disseminate error, and sanction ignorance, than the paltry plates which have accompanied certain publications. Instead of the genuine vaccine disease, they exhibit the spurious pustule in all its glory.

We have, however, the satisfaction to hear, that the new practice is every day becoming more and more general: and we have reason to indulge a hope, that it will soon be popular and universal.

In addition to the numerous instances of its beneficial effects already adduced, I am now authorised to mention the following.—Thomas Gooch, Esq. and his lady, have inoculated 652 persons, in the county of Suffolk, with the Cow-pock; every one of whom went through the disorder so well, as not to occasion a moment's uneasiness to their kind benefactors. Not a single secondary pustule appeared.

Mr. and Mrs. Gooch, who are now in London, very much regret their present absence from home. The small-pox rages in their neighbourhood. Many persons have died of it in the course of the last week, who through their own idleness and obstinacy, or the abominable falsehoods propagated by self-interested persons, have been prevented from accepting the pledge of safety.

Petitions have been received from some of the survivors, expressive of their concern for having rejected the proffered boon; and entreating Mr. and Mrs. Gooch to inoculate again on their return.

On the 10th of June, 1801, I received a letter from Dr. Waterhouse, dated, Cambridge, New-England, April the 24th, by which I have the satisfaction of hearing, that the vaccine virus which was sent to him in the spring, Dr. Jenner, and by me, succeeded.

Dr. Waterhouse had met with pustulous eruptions in his early practice: but from what cause it is im-

possible to say. We must admit the improbability of a variolated atmosphere having had any share in this equivocal generation, since the government displays a paternal regard to the safety of the people. By the printed correspondence between Dr. Waterhouse and Dr. Haygarth it appears, that when a person is seized with the small-pox, he is immediately sent by the municipal authority to a secluded hospital. But if the disease has proceeded too far for the patient to be removed, the street where he resides is closed up with a high fence; and a red flag is hoisted on the house where the infection prevails.

This house, distinguished by the sign of the *red flag*, the Americans shun, as much as the noble lord, who crushed a certain monstrous production in parliament, would shun a house distinguished by the sign of the *red rag*. Should the legislatures of every other country follow the example of the government of New-England, and at the same time avail themselves of the full advantages which Dr. Jenner's providential discovery now offers for their acceptance, the reign of that pestilence, which has ravaged the world for a thousand years, must soon terminate; and leave behind nothing but a regret, that all the precautions which reason suggests, were not sooner adopted.

Dr. Waterhouse informs me, that the second patient inoculated in the western hemisphere had a full maturated pustule, four inches from the place of inoculation; from which he inoculated another child,

who had the disease in perfection. The learned professor has heard of numbers, besides his own patients, who have had a considerable crop of pustules. Alas! we have heard of the same thing; and shall continue to hear of it, till all practitioners have discontinued to impregnate their lancets alternately with variolous and vaccine matter; and till a wall of separation is erected, between those who labour under the small-pox, and those who are inoculated with the vaccine disease.

Dr. Waterhouse having received Mr. Addington's pamphlet, was confirmed in his opinion, that pustulous eruptions are the legitimate offspring of the Cow-pock: but Mr. Addington having since retracted his error, that prop falls to the ground.

Some unlucky cases, it seems, have damped the ardour of a people, who received the new inoculation with a candour, liberality, and even generosity much to their credit. I some time ago read in a public print, an account of variolous matter having been employed, instead of vaccine, in some parts of the United States. By this unfortunate transaction, the small-pox was introduced into that part of the country; and the mistake was not discovered, till a number of persons had been infected by the disease.

This was enough to damp the ardour of any nation. When America heard that a beautiful stranger was arrived on her coast, she received her

with open arms; but it was high time to renounce all intercourse, when she discovered, that instead of the lovely Vaccina, she was harbouring a serpent in her bosom.

By a Bostonian paper, the Independent Chronicle, for Jan. 1, 1801, sent by Dr. Waterhouse to Dr. Jenner, we learn, that several persons, conceiving, as others have done on this side the Atlantic, that the practice was simple, because the disease in itself is mild and safe, had inoculated with vaccine matter, without studying the art, or even reading a single syllable that had been published on the subject.

The consequence was, that either they did not excite the genuine disease, or if it was excited, they took matter at too late a period. This matter, instead of the true pustule, occasioned extensive inflammation; and extensive, but superficial ulceration; without rendering the patient insusceptible of the small-pox.

In the same paper Dr. Waterhouse has published some strictures on the precipitate and incautious manner, in which numbers of practitioners had commenced their operations with supposed vaccine virus; without understanding the true genius of the disease, or even gleaning the least instruction from books. He plainly saw, that they were deluded by the spurious pustule, as too many others in Europe had been; and therefore gave out, that the winter season

was unfavourable for inoculation, in order to suspend the practice till efficient matter should arrive.

Another letter is inserted in the same print, signed B * * * *, asserting, that the opinion of matter degenerating by repeated transmissions, entertained by Dr. Waterhouse, is contrary to analogy, as well as to the general experience of European practitioners. The author of this letter subjoins a communication from Mr. Mann, of Wrentham, stating, that he had in his early practice constantly mistaken the simple inflammation attending an incision for the vaccine disease; and confessing, that he had often excited erysipelatous inflammation instead of the genuine pustule; of which, as well as of the proper time for taking matter, he had not the slightest idea, till he saw the patients of the gentleman by whom this letter is published.

He observes, that the erysipelatous affection which accompanied the spurious disease, left a superficial ulceration, and scab; and little or no indentation behind. Since he has obtained limpid matter, these peculiarities have all vanished.

I have already mentioned, that vaccine inoculation was become less popular in America, in consequence of the gross blunders committed by those, who entered into it with too much precipitation; but, we are informed, the use of the practice is not the less esteemed on account of its abuse, either by persons

in power, or by the enlightened part of the rest of the community. As a proof of this, the following letter has been received by Dr. Waterhouse from the President of the United States.

"SIR,

"I received last night, and have read with great satisfaction, your pamphlet on the subject of the Kine-pox; and pray you to accept my thanks for the communication of it. I had before attended to your publications on the subject in the newspapers; and took much interest in the result of the experiments you were making.

"Every friend of humanity must look with pleasure on this discovery, by which one evil more is withdrawn from the condition of man; and must contemplate the possibility, that future improvements, and discoveries, may still more and more lessen the catalogue of evils.

"In this line of proceeding, you deserve well of your country; and I pray you, Sir, accept my portion of the tribute due to you, and assurances of the high consideration and respect with which I am, Sir,

Your most obedient

humble servant,

THOMAS JEFFERSON."

Such are the unrefined notions of this great man, that he thought a physician might communicate use-

ful intelligence in a common newspaper, without degrading himself, or his profession.

Whether this opinion is well or ill founded, I shall not presume to determine. It is, however, only justice to say, that this letter of the President of the United States breathes the spirit of philanthropy,—the spirit of Washington; and, that his vigilant attention to the welfare and happiness of the people, proves him worthy to fill the station of his immortal predecessor.

In England, the public opinion is, at the time of my writing this, rather wavering. Falsehoods, propagated by the most base and despicable characters, have been too successful. But, while the great bulk of mankind, always credulous, and always ignorant of their true interest, listen with avidity to every idle tale, the cause of truth and of humanity daily gains new converts and new champions, among the learned, liberal, and enlightened part of the medical profession.

Of this, the testimonials already given are convincing proofs. Others are continually transmitted to the metropolis from all parts of the kingdom. The following is an example, which it would be equal injustice to Dr. Jenner and to the public, to suppress.

Benevolent Medical Society for the Counties of Essex, and Herts, June the 8th, 1801.

Resolved, 1st. That the thanks of this court be given to Dr. Jenner, for his invaluable treatise on the Variolæ Vaccinæ; wherein he has clearly and satisfactorily demonstrated, that the inoculated Cow-pox is a certain preventive of the small-pox.

That as men of humanity, associated for the purposes of benevolence, we should be wanting to the character we assume, did we neglect the present opportunity of bearing testimony to the value of this providential discovery; which, if generally practised, we are of opinion, would effectually eradicate the small-pox, one of the severest scourges of the whole human race.

That this court, in thus requesting Dr. Jenner to accept their unanimous thanks, for his inestimable publication, entertain no doubt, but posterity will do honour to his memory, and record his name amongst the real friends of man.

2d. That the resolution now unanimously passed, be fairly transcribed, and sent to Dr. Jenner by the chairman; and that a copy of it be sent for insertion, in the Medical and Physical Journal; and also in the Chelmsford and County Chronicles; and that the names of the members present be added thereto.

This vote of thanks was signed by one physician,

and twenty surgeons.—The following is a copy of the letter in which it was inclosed.

" Dear Sir, *Colchester*, June 8th, 1801.

" After physicians and surgeons of the first eminence in this empire, as also men of distinguished abilities and character in foreign countries, have vied with each other in rendering you the just tribute of applause, for your exertions in the cause of humanity, in pointing out the way in which that dreadful malady the small-pox might for ever be eradicated, the Benevolent Medical Society for the Counties of *Essex* and *Herts*, this day met at their annual Court of Audit, have eagerly embraced the opportunity of returning you their unanimous thanks, for your inestimable publication on the Variolæ Vaccinæ, and for your active endeavours to ameliorate the condition of *man*.

I am particularly happy, Sir, that it falls to my lot, not only as your private friend, but as the organ of this respectable society, to transmit to you the inclosed resolution; as it gives me an opportunity of expressing the high sense of gratitude I feel for *that man*, who, by firmness and perseverance, has overcome every difficulty, which prejudice or unforeseen circumstances placed before him; and established a practice, the advantage of which to mankind is greater than words can express, or our ideas properly appreciate. That you may long,—very long, enjoy the honours you so justly merit, and that your name

may descend to futurity as the benefactor of your race, is the sincere wish of,

Dear Sir,

Your friend,

And most obedient humble servant,

R. R. NEWELL,

Chairman of the Court of Audit of the Benevolent Medical Society for Essex and Herts."

A treatise on Vaccine Inoculation, giving an account of the result of the observations made on that subject, at Hanover, and in the environs of that capital, has lately been published at Leipsic; by Dr. Ballhorn, physician to the Court, and Mr. Stromeyer, surgeon to the Court. This treatise is dedicated to Dr. Jenner, and Dr. de Carro.

The authors first advert to an assertion of the Rev. Mr. Fosbrooke, whom they suppose to be a physician, in the Medical Review for January 1800, "that in a thousand subjects inoculated with the vaccine disease, there was not a single instance of *vaccine eruption.*" Mr. Fosbrooke's words, however, are misquoted. What he maintains is, that in all those cases, not a single instance of a *varioliform eruption* occurred.

The conclusion they draw from these premises, is erroneous; namely, "that the vaccine matter taken in London, differs from that which is taken in the country parts of England." To prove the fallacy of

the opinion which the learned authors of the treatise under consideration have formed on this head, I need only refer the reader to Dr. Jenner's own letter, page 79 of this work. It will there appear, that Dr. Jenner had made a comparative trial of the town and country vaccine virus; and that the result, in both cases, was the same.

Equally erroneous is their conjecture, that pustulous eruptions arise partly from a local cause; unless the contamination of vaccine with variolous matter, be local.

Equally erroneous is their aphorism, that when, either during the course of vaccine inoculation, or within a short time after, pustules of an equivocal nature appear on the body, we may be assured it is only a vaccine eruption, if the pustules on the arm have, or have had, a surrounding inflammation.

Had the learned authors been aware of this, they would not have accused a physician of Hanover, who related a case in Hufeland's Journal, of writing and publishing a falsehood prejudicial to the propagation of this useful discovery; because he asserted, that a child at Hanover had the small-pox, fifteen days after inoculation of the Cow-pox.

So many cases, in which the vaccine disease has been accompanied with, or immediately succeeded by the small-pox, are now on record, that the most

incredulous cannot long remain unconvinced, These cases have been occasioned by a previous infection from the small-pox; and in no one instance was this previous infection ever more easily accounted for, than in that related by Dr. Ballhorn and Mr. Stromeyer; for we are informed, that when the child was inoculated, many children in the neighbourhood, and even in the same house, laboured under the disease; and that his own brother was in the same apartment, in whom the small-pox had begun to arrive at a state of suppuration.

Had the learned authors known the frequency of such an occurrence, they would not have affirmed, that this child had not the small-pox; but only a suppurative vaccine eruption.

These gentlemen have fallen into the same error, into which they say, Dr. Woodville has fallen; that of mistaking for a vaccine eruption, what undoubtedly sprung from infection of the small-pox; and what, they justly conclude, was the small-pox. To this dreadful disease, they are persuaded, the child who had been inoculated with supposed vaccine matter, fell a victim.

They are desired by Count Kielmannsegge, a Hanoverian nobleman, to communicate the following anecdote; which affords a fresh proof of the lasting effect of vaccine inoculation, as a preservative against variolous contagion.

" A woman who lives in the neighbourhood of Ratzebourg, remembers that she had the Cow pox about thirty years ago; of which her hands still shew the marks. She caught the disease by milking. Since that time, she is become the mother of a numerous family; and has never had the small-pox, although she has, at differenr periods, nursed six of her children when labouring under that disease. Dr. Münch, Physician, of the court, will publish this anecdote, certified by the magistrates of the place."

The learned authors reprobate, in terms of becoming indignation, the temerity of those practitioners, who perform the vaccine inoculation mechanically; many of whom are totally unacquainted with the theory of this department of medicine, and have not read any thing which can afford them the least information on the subject; and have no end in view but their own personal advantage. The various blunders committed by these practitioners are next enumerated; but we need not enquire minutely, what blunders have been committed at Hanover, we have a fruitful harvest in our own country. Suffice it to say, that practitioners were not wanting, who, when they perceived the least trace of inflammation, or of a spurious pustule, rashly pronounced inoculation complete, and the patient secure.

Dr. Ballhorn and Mr. Stromeyer bestow a just encomium on a great number of individuals, who

without being of the medical profession, have practised vaccine inoculation with great zeal and humanity; and express the sincere pleasure they take, in aiding such persons with their counsels, and promoting their patriotic designs.

But while they do justice to the laudable intentions of these philanthropists, they very judiciously remark, "that we cannot always depend on those inoculations which are performed by persons who have never practised physic; and who, deceiving themselves with regard to the real characteristics of the Cow-pox, may very well consider incomplete and defective cases as complete; and, by their rash and inaccurate reports, endanger the well-earned fame, which the legitimate practice of vaccine inoculation at present enjoys.

Two plates are added to this treatise. The first exhibits the course of the vaccine pustule; the last a comparative view of the vaccine and the variolous pustule, when produced by inoculation. The latter is professedly borrowed from the comparative statement, published in England. They are not executed in that masterly style, which we meet with in England. They are not finished by the most able artists, like the plates in Dr. Jenner's treatise, or those in the comparative statement; but they are entitled to the praise of fidelity, and bear the true stamp of the vaccine disease.

The first experiments made in Hanover were too few in number, and the mode in which inoculation was performed was too defective, to enable professional men to ascertain the utility of the practice. Not being able to procure, what they could depend on as genuine vaccine virus, in Germany, they were obliged to wait till the beginning of last year; when Dr. Jenner and Dr. Pearson sent them a fresh supply.

The mortality of the small-pox at Hanover, where it raged till the end of the year, and, in the month of August alone, proved fatal to one infant in every five, together with the unfortunate event of variolous inoculation in many places, afforded ample opportunity for a fair trial of vaccine inoculation; and the favourable reports received from every quarter, inspired the public with greater confidence in the practice.

The authors inform us, that the vaccine matter sent to them by Dr. Jenner, as well as that which was sent to them by Dr. Pearson, proved efficacious. After these two stocks of dry matter were exhausted, they supplied themselves with fresh virus produced in their own patients.

They remarked, "that Dr. Jenner's matter produced a more sensible local effect on the part inoculated;" but "that Dr. Pearson's matter, as well as that produced at Hanover, occasioned a small erup-

tion." Hence they suspected that there was a difference between the virus taken in London, and that taken in the country.

This suspicion they communicated to Dr. Pearson; who returned for answer, that the difference in the effects of the two sorts of matter seemed to be merely accidental; depending on a difference in the constitutions of the children inoculated, and not on any distinct properties in the matter.

The authors, however, are still tenacious of their opinion; which they endeavour to support in opposition to Dr. Pearson, by Mr. Fosbrooke's authority; but in vain. Is is well known in England, that Mr. Fosbrooke agrees with Dr. Jenner, and with the public, that the pustulous eruptions, which were for awhile so numerous in this metropolis, arose, not from the London cow, but from the London practice. To the truth of this assertion, the various publications of Dr. Jenner himself, and of others who have written on the subject, bear ample testimony.

We are informed by the learned authors, that there are monsters under the denomination of medical men, who, having received vaccine matter from them, and succeeded in a number of inoculations, refused to give a portion of the same to other practitioners. Surely it is the indispensable duty of every government, to appoint public institutions, where this excellent preservative shall be distributed gratis; and

not to leave the people committed to their charge dependent on the bounty of such men.

In the course of ten months, ending October 31, 1800, Dr. Ballhorn and Mr. Stromeyer had inoculated above 500 persons with the vaccine disease; and having given matter to other physicians and surgeons, they could reckon up above a thousand successive inoculations, which had been performed in their metropolis, with Hanoverian matter. Hence they think it probable, that a greater number of experiments in the new inoculation have been made in Hanover, than in any other district of so small a compass, on the continent of Europe. This they ascribe, partly to the terror which was occasioned by the reigning epidemic; and partly to the general approbation which the Jennerian practice met with in Hanover, from all ranks of medical men.

The learned authors inform us, that they have inoculated the weak and the strong, infants and adults, those of all ranks and conditions, in the most different situations, and in all seasons; whatever was the temperature of the air and whatever was their particular regimen; without ever having observed any alarming symptoms. They declare, that no person has ever been attacked with the small-pox, when vaccine inoculation was real and complete.

They are of opinion, that cutaneous disorders, and especially the itch, render a person insusceptible of

the Cow-pox. My experience induces me to believe, that the latter has no such effect; but the applications employed in the cure of that disease, either lessen the susceptibility of the subject to the infection of the Cow-pox, or decompose the virus.

Having made several counter-experiments, in order to ascertain whether those who had undergone vaccine inoculation, were capable of receiving the infection of the small-pox, they once more renew the most solemn assurances, that not one of those variolous inoculations produced the least effect. Dr. Matthai, who then practised at Wurnstorf, put his vaccine patients to the same trial; and with the same success.

Dr. Ballhorn and Mr. Stromeyer are of opinion, that the natural small-pox, which raged at Hanover fifteen months, and proved so fatal, furnishes sufficient proofs of the efficacy of this preservative. While it served as a powerful incitement of vaccine inoculation, it never attacked one of those, on whom that operation had been successfully performed; unless variolous infection was previously received.

Hence it has gained a considerable number of new partisans. Even those who were at first its antagonists, and most prejudiced against it, not being able to allege a single instance, in which it had been either injurious, or useless, became its warm advocates; and at present, almost all the medical prac-

titioners in Hanover, and the neighbouring towns, recommend it to their patients.

The Medical Journal for July, 1801, contains, as usual, various important communications on the same subject. The first is from Mr. Clement, surgeon, of Shrewsbury; who remarks, that the volume of evidence already given in favour of vaccine inoculation, may perhaps render it unnecessary to bring forward any additional proofs of its benign influence.

Mr. Clement was at first prejudiced against this discovery; which, he confesses, has since proved to be an estimable one. He inoculated some children with vaccine matter in the autumn of 1799; whom he attempted to infect with the small-pox the ensuing spring, but to no purpose.

At that period, he was also engaged in an extensive inoculation of the small-pox; which gave him an opportunity of observing the vast difference between the two diseases, with respect to their mildness. In the small-pox, we frequently meet with convulsions, at the time of the eruption, which sometimes prove fatal; and, exclusive of the present dangers attending the disease, a dreadful catalogue of evils following in its train; such as ophthalmia, scrophula, blindness, white-swellings, and almost all the various ills that flesh is heir to.

Who, that has heard a celebrated lecturer on the

philosophy of chemistry, can help regretting, that any one sense should be wanting to him, who possesses every other sense in such perfection? What numbers have I seen, who, by that dreadful disorder, the small-pox, were

> ——————from the cheerful ways of men
> Shut out, and from the book of knowledge fair,
> Presented with an universal blank!

This very day I was applied to by the relation of a boy, who lost his sight when three years of age, in consequence of inoculation for the small-pox. His friends wished to gain admission for him to a most excellent institution, which is almost half filled by the miserable victims of the small-pox.

Mr. Clement justly observes, that the necessity of inoculating children during the period of dentition, a necessity which frequently occurs, is one insurmountable objection to that practice; whereas the Cow-pox is so perfectly harmless at all ages, and under all circumstances, that he has inoculated near two hundred of various ages; and not one unpleasant symptom has occured.

"During the excessive heat of last summer," says Mr. Clement, "the natural small-pox was very rife, and proved extremely fatal. When but one of a family was attacked with the disease, I frequently got beforehand with it, by immediately inoculating the rest with the Cow-pox; which went through its

usual mild course without eruptions. In several instances, parents had children covered with small pox, under the same roof, and often in the same bed; while others were under the influence of the Cow-pox, which proved their perfect security. I hope it is not necessary to particularise cases, when they are so abundant; and when so many facts have constantly been adduced, through the medium of your valuable publication. I have the pleasure to add, that the Jennerian Inoculation is universally adopted, by the medical gentlemen of this town and neighbourhood."

The next suffrage in favour of vaccine inoculation, in the same Journal, is that of Mr. Peck, of Higham Ferrers. Mr. Peck is of opinion, that although our predecessors have done much towards the relief of suffering humanity, yet much was left for the present period to perform; which may glory in very important discoveries; and boast of characters, whose active exertions, and unceasing endeavours, have been crowned with success, and emblazoned with the most brilliant lustre.

Of this he adduces the discovery of Dr. Jenner as an instance; which, he says, undoubtedly will exterminate that dire scourge of nations, the small-pox.

In the same publication, Dr. Paterson, of Montrose, says, " When we contemplate the vaccine inoculation, we are at once lost in admiration and gra-

titude." He then pays a just tribute of applause to Dr. Jenner its immortal discoverer; to Dr. Pearson for having promoted a spirit of investigation; and to the Medical Journal, as a valuable medium of information on this important subject.

Dr. Paterson is of opinion, that after the immense body of evidence brought forward, and the very honourable testimonial which appeared in the Journal, containing the names of almost all the eminent practitioners in London, in favour of vaccine inoculation, no name or testimony of any individual whatever is necessary; otherwise, he declares, that his should not be wanting.

Between three and four hundred persons have been inoculated with vaccine matter, in the neighbourhood of Montrose. The conclusion Dr. Paterson draws from what he has seen, is, that the Cow-pock is a mild disease; and may, not only with safety, but with advantage, be communicated to children, at any period during teething. He has observed the health of many children improved by the process. Several of those who were inoculated with the vaccine disease at Montrose, have since been inoculated with variolous matter; but without effect.

The next article is communicated by Mr. Humby. It corroborates what is well known to all medical men of experience, that a local pustule, capable of yielding infection, may be produced by variolous

inoculation, in a person who is rendered insusceptible of the constitutional disorder.

The next article is by Dr. Winterbottom; who says, the inoculation of the Cow-pock is safe, and practicable, at every period of life, and almost in every state of health. He adds, When we reflect, that the Cow-pock offers at the same time, the means of annihilating that dreadful scourge the small-pox, it evidently becomes our duty to spread the former as extensively as possible.

He advises, however, that notwithstanding the very rapid success which has attended the introduction of the vaccine disease, and notwithstanding it has triumphed over all opposition, some caution ought to be observed in the choice of subjects destined for inoculation, lest we should entail disgrace on the practice.

The same number of the Journal contains an extract of a letter, received by Dr. Clarke, from a friend at Palermo, stating, that the new practice is in high reputation at Palermo; and that Dr. Marshall has inoculated nearly ten thousand persons, with success. We have also the pleasure of hearing, "that the king continues to interest himself in its propagation; and has desired the priests to recommend it from the pulpit." Under such auspices, a practice which promises such incalculable benefits to the human race, must eventually triumph.

Very flattering accounts are also received, of the progress which vaccine inoculation still makes on the Continent. In France it begins to excite a general spirit of emulation; and to kindle a more ardent enthusiasm in its favour, in the breasts of learned and ingenious men, than any former discovery could ever boast.

The Parisian press now teems with luminous dissertations on that subject. One has lately been published by Dr. Moreau, member of the commission of vaccine inoculation of the Louvre, and of several other learned societies.

This work, entitled "An Historical and Practical Treatise on Vaccine Inoculation," he has dedicated "to the author of the discovery, and benefactor of the human race, Dr. Jenner; and to the members of the central committee of vaccine inoculation at Paris; those respectable citizens and enlightened philanthropists, who have deserved well of their country, by causing her to adopt the discovery of Jenner,—by spreading and naturalizing, in the different parts of the French territory, a beneficial practice, which must at length exterminate that inveterate and terrible scourge, the small-pox."

The learned author of this elaborate work observes, that hitherto nothing but pamphlets, and other small papers, had been published on the subject; but he thinks the moment is at length arrived, for uniting

a vast number of scattered materials in one elementary and classical treatise.

He observes, that although the advantages of vaccine inoculation can no longer be contested, and the question whether it ought to supply the place of the old practice, is entirely decided by observation and experience, yet a faithful register of the facts which produced this conviction, can neither prove useless or unimportant.

It is but justice to Dr. Moreau to affirm, that he has executed the task which he had undertaken, with great ability. He has given the substance of what has been written on vaccine inoculation, as far as he was furnished with materials; and his work is well calculated to promote the propagation of the new practice on the Continent.

The learned author, however, is mistaken in supposing, that the Cow-pox is lately discovered, and that it is confined to the county of Gloucester. This is the more remarkable, when his own book contains evidence of its being common to several parts of England; and of its having been known from time immemorial. One proof of the latter position is, that a man was inoculated for the small-pox, by Dr. Jenner, at the age of sixty-two, who had the Cow-pox fifty-three years before. The author is probably right in supposing, that the Cow-pox is the only disease ever discovered, which may be considered as a benefit.

Of the small-pox, in which certain medical practitioners seem of late to have discovered some hidden charm, visible only to themselves, our author has not drawn a very amiable picture. He describes it as a dreadful scourge, which has often decimated the human race;—a scourge, which, at its first invasion of Kamschatka, mowed down two-thirds of the inhabitants of a country, which the rage, the vices, and the diseases of Europeans had so long spared.

In answer to those, who, in order to establish the reputation of the new practice, deem it necessary to prove some analogy between the small-pox and the proposed substitute, the learned author observes, that different causes frequently produce similar effects. He is of opinion, that the laws of the animal economy can only be learned by careful experiment, and long observation; and that all the fine-spun theories, which say to Nature, hitherto shalt thou go and no further, are to be considered as the phantoms of imagination, and the follies of a day.

The learned author asserts, that the utility of vaccine inoculation is no longer problematical; that its advantages are well ascertained; and that it is now making a rapid progress in all parts of Great Britain, where prejudice and self-interest attempted in vain to prevent its beneficial consequences, and arrest its course.

After enumerating different causes, which have

conspired to promote the propagation of this salutary practice in Great Britain, such as the recommendation of persons of rank and celebrity, he remarks, that goverrment itself was not idle; having ordered all soldiers and seamen, who had not had the small-pox, to be inoculated with the Cow-pox, before their embarkation.

"Our neglect," says he, "of inoculating our seamen, at a former epoch, was extremely unfortunate for many parts of the world, to which we exported the small-pox. It was the cause of a scourge, of which we ought to annihilate every vestige. If our hearts are not utterly corrupted, if we are not for ever deaf to the voice of justice and humanity, we shall import vaccine inoculation into those countries; and make some atonement for the crime."

Our author copies the account of the child, who died after inoculation at the Small-pox Hospital, from M. Husson; who says, it was the opinion of Dr. Woodville himself, when in Paris, that the infant fell a victim to the small-pox.

Dr. Moreau remarks, that inoculation of the small-pox was received with reluctance, by those whose duty it was to have cherished and promoted every improvement of the healing art. Though introduced into England at the beginning of the reign of George the first, practised under the most happy auspices, fostered by the sunshine of the Court, and attended with great success, its progress was but slow. It was

not countenanced by the College of Physicians, as a body, till the year 1755.—It was then so fortunate as to engage the attention of the faculty;

——————— quæ, sera, tamen respexit inertem,
Respexit tamen, et longo post tempore venit.

"In 1755," says our author, "the College of London, in order to refute certain calumnious imputations raised at Paris, against the salutary effects obtained at London from inoculation, declared, that all those objections were refuted by experience; and that the College regarded this practice as extremely salutary for mankind.

"This declaration," adds Dr. Moreau, "preceded by nine years the decree which la Condamine and Antoine Petit extorted from the faculty of Paris; a decree, by which that ancient body, which was almost always hostile to discoveries, pronounced the toleration of a practice, of which they ought to have proclaimed the triumph; and to have acknowledged, in the most solemn manner, its beneficial effects."

This decree was liberal, considering whence it issued; and shews the state of civilization in France, in the eighteenth century. Had it been introduced into the western parts of Europe in the fifteenth century, those who practised it would have been convicted of witchcraft, and have been sent to the devil, for pretending to be wiser than their neighbours.

Our author observes, that the advantages of inoculation, and the mode of performing it, had been communicated by Timoni, a physician of Padua, who had been a witness to the practice eight or ten years, and had performed the operation himself, to Dr. Woodward, in 1713; and that his account is preserved in the Philosophical Transaction, No. 339. Nevertheless, no benefit resulted to the community from this information; and it is to Lady Mary Wortley Montagu we are indebted for this improvement of the healing art. *Dux femina facti.*

To shew the prejudice and ignorance of the learned, in times past, it will be sufficient to mention, that two or three centuries ago, any one who dared to cure a fever at Rome, by means of an antimonial medicine, was condemned to the gallies. If, therefore, inoculation was not received with merited applause by the learned body before alluded to, it must be remembered, that the healing art was not improved by the faculties of any metropolis or university; but by the faculties of Harvey, the faculties of Sydenham; the faculties of Pott, the faculties of Hunter, the faculties of Hewson, and the faculties of JENNER.

Let us not despair, but it may be still farther improved, by the faculties of other individuals: *Nam multum egerunt qui ante nos fuerunt, sed non peregerunt; multum adhuc restat operæ, multumque res-*

tabit: neque ulli, nato post mille secula, precidetur occasio aliquid adhuc adjiciendi.

After expatiating on the merits of Girod, who rendered signal service to the state, by propagating inoculation in the country parts of France, our author exclaims, "A nation that was sensible of the value of such a benefit, would not fail to erect a monument, or to consecrate a medal to such a man."

Should the former method of shewing their gratitude be preferred by the French nation, I would recommend the following epitaph,——

He asked for bread, but he received a stone.

According to our author, Dr. Nissen, of Seegber, has written word to Dr. de Carro, that the Cow-pox, and its antivariolous virtues, are not unknown in the Duchy of Holstein. Dr. Sacchi has published a report of experiments, tending to prove, that it exists also in Lombardy.

In this place I beg leave to observe, that Dr. Waterhouse has sent Dr. Jenner an account of its being discovered in different parts of America; and has transmitted some of the matter, that he may determine by proper experiments, whether it is of the true species, or not.

We have the authority of Dr. Moreau for asserting, that vaccine inoculation, the discovery of the respectable and immortal Jenner, which has so hap-

pily taken root in the south of Europe, is also planted in Sweden. He thinks it probable, but I fear he is too sanguine in his hope, that it is by this time planted in the islands of the South Sea; where Europe has more than one kind of reparation to make to the wretched inhabitants, for the wrongs which they have received at her hands.

In France, we are assured by our author, the benefits of vaccine inoculation are daily rendered more and more evident, in spite of the opposition and misrepresentation of those practitioners, whose fortune unhappily depends on the inoculation of the smallpox. These gentlemen will say in their defence, like their brother in Romeo and Juliet,—*Our poverty, and not our wills, consented.*

The author thinks we have ample proofs of the utility of the new practice; that it is an insult to common sense, to say with an important and solemn tone, time and experience must decide this question; and to demand of posterity, what so many thousands of experiments will enable the present age to determine.

In his account of the propagation of the new practice, the author observes, that it was first announced to the inhabitants of the Continent by the editors of the Bibliothéque Britannique; and that de Carro was, among those medical practitioners who are truly the friends of man, one of the first by whom it was adopted.

He also gives a detail of the proceedings at Paris; and the establishment of vaccine inoculation at Reims by Dr. Husson; who had the pleasure of introducing this beneficial practice into his native country. In short, he has collected abundant evidence, to confirm the sanguine hopes indulged by Dr. Jenner; to prove, that his discoveries will ameliorate the condition of man; and ensure to their author the esteem and gratitude of posterity.

Dr. Moreau thinks four punctures may suffice; but observes, that some practitioners make ten, twelve, and even more. Others, he says, propose to augment the number to a hundred, or to two hundred. They wish it seems, to produce a *general eruption*; in which they are likely to succeed; whether to the disgrace of themselves, I know not,—but certainly to the disgrace of the practice. Besides, if the public are *goaded* in this manner, they may kick against the pricks.

The learned author informs us, that sixteen thousand persons died of the small-pox at Naples, in one year, and twenty thousand at Paris in another. He describes villages deserted, countries depopulated by that pestilence. He describes the fell destroyer as making his ravages round the world. I trust, however, enough has been said, to rouse the public to a sense of the danger that surrounds them; otherwise I would prolong the melancholy narration:

Quanquam animus meminisse horret, luctuque refugit.

The learned author refutes the various arguments that have been advanced against this practice. He has brought forward the ridiculous objections that have been urged; and put them into the mouth of an old woman.

He has brought forward the names of the most respectable, and the most celebrated characters, both of this and that side of the water, who patronise vaccine inoculation, such as Sir Joseph Banks, De Liancourt, Pinel, Thouret, Sabatier, &c. opposed to names,—which we never heard before,—and never shall hear again.

Dr. Moreau prefers a needle to a lancet, in inoculation, as being less terrifying to a timorous infant, and a tender mother. The needle is also thought preferable by the special committee appointed at the Louvre, for the propagation of the new preservative against the small-pox; of which Dr. Moreau is a member.

By the report of Dr. Husson, cited by our author, it appears, that in one instance, which fell under the observation of the medical committee at Reims, no elevation took place at the puncture, till the twenty-second day.

From observations made at Paris, and elsewhere, we have now great reason to believe, that a pustulous eruption is never excited by the Cow-pock; and

that when vaccine vesicles appear in any part of the body, they are owing to accidental inoculation, from the patients having scratched the pustule, and inserted the matter with their nails.

I have often been surprised, that any one should speak of the Cow-pox, a disease communicable by inoculation, as not contagious: this error Dr. Moreau likewise endeavours to correct. I have alleged more than one reason for believing, that it is capable, in some instances, of infecting where there is no solution of continuity in the cuticle: but there is no reason to suspect, that it can prove infectious by effluvia.

Speaking of the singular advantages of vaccine inoculation, which is not only the means of checking the ravages of the small-pox, but also of drying up its poisoned sources, the learned author asserts, that the merit of Dr. Jenner's important discovery ought to reduce his enemies to eternal silence; and that, if he had lived in former times, when the most useful virtues were held in due esteem, altars would have been erected to him; and he would have been worshipped, as one of the greatest benefactors of mankind.

After all that has been published in England, and quoted by Dr. Moreau, we cannot help wondering that he should ask, whether the Cow-pox is confined to the county of Glocester?

Dr. Moreau affirms, that the Cow-pox has been discovered in the department of Landes, and some other parts of France; and that several persons, who had been inoculated with the vaccine virus discovered at Milan, have been subjected to the variolous test, without receiving infection.

This work also contains a communication from Dr. Odier, of Geneva; stating, that from twelve to fifteen hundred persons have been inoculated in that city and its environs, without experiencing one unfavourable symptom. Geneva, we are told, is, like London, the centre of vaccination; whence it spreads far and wide. Dr. Lavater, of Zurich, Dr. Percy, of Orbe, and several individuals of distinction, as M. D. Ch. Odier, of Vevay, have introduced it into the places of their residence with the greatest success. Dr. Odier hopes, that from the united efforts and writings of the physicians of Geneva, and those of Paris, it will soon become very general throughout Switzerland and France.

In Paris, an hospital for vaccination was appointed, in the course of the spring, 1801, by the Prefect of the Seine; where the Central Committee for vaccine inoculation continue their operations with a new degree of zeal and activity. Other governments will undoubtedly follow so laudable an example; and appoint public hospitals for this beneficial practice.

By the last account published by the Central Committee, we learn, that they have been constantly occupied in multiplying proofs, of the vaccine inoculation being a security against the small-pox; and that, in the hospitals of Orphans, of Maternity, and of Enfans de la Patrie, their labours have been crowned with success. Nor have their researches ended here. They have traced to their sources all the unfavourable reports that have been propagated concerning the practice; and found them false.

The committee pursue, without relaxation, the measures most proper for rendering this practice universal; and there are but few of the departments, to which the benefits of their correspondence have not extended.

The committee established at the Louvre have also concurred, in propagating this useful discovery; as well by sending missionaries into the departments, as by gratuitous inoculation; and the zeal of all its members, to enlighten the minds of their fellow citizens. In consequence of such unwearied exertions, the friends of humanity have the satisfaction of knowing, that the benefits of vaccine inoculation are daily multiplied, in almost every part of Europe, and the civilised world.

By an extract of a communication from Dr. Odier, published in the same work, we learn, that Dr. Maynoir, who carried with him an infant under inocula-

tion, in order to establish the practice at Berne, made the following observations, which tend to confirm those of Dr. Jenner.

Matter taken on the ninth day, succeeded in every instance, except one; in which, from the resistance of the child, too deep an incision was made; and the matter was washed away by the blood that issued from the wound. Half those of the tenth, and all those of the eleventh day, failed.

Dr. Moreau presents us with a chemical analysis of Cow-pock matter, which was made with great care, by citizens Husson and Depuytren. This analysis of the fluid, although it may not throw any light on its mode of action, serves at least to gratify a natural curiosity of the human mind.

"When exposed to the air, it readily dries, without loosing its transparency. It acquires the hardness of glass; and, forming a scale, adheres like a varnish to the surface upon which it is applied. It oxydates iron. If left to dry in the vaccine vesicle, it forms itself into small and hard globules. When liquid, it readily dissolves in water; and, when solid, it enjoys the same property.

"When exposed to heat, it presently becomes turbid; exhales a slight odour of carbonate of ammonia; and is soon converted into a light cellular

charcoal. It produces no alteration in the colour of syrup of violets; nor in that of tincture of turnsol.

"When tried with alcohol, nitrate of mercury, nitrate of silver, or nitric acid, it affords a white precipitate; which will neither dissolve in potash, nor in the muriate of ammonia. The concentrated sulphuric acid, oxalic acid, the vapour of oxygenated muriatic acid, potash, barytes, and muriate of ammonia, neither produce the least action upon it; nor alter, in any manner, its external qualities. It seems to consist of water and an albumen; of which the proportions are not known."

Observations on the effects of vaccine inoculation in negroes, and mulattoes, have been made at the National Institute of the Colonies, by Dr. Depuytren; who presides over the anatomical department of the school of medicine at Paris. The inoculation of mulattoes presented nothing particular. In that of blacks, although the disease began to shew itself on the fourth day, as in whites, yet it was more readily terminated. On the first day of its appearance, the pustule almost constantly yielded a fluid; which was perfectly transparent; and, whether used immediately, or kept a month, was capable of communicating a similar disease to that from which it sprung.

The learned author remarks, that the thinness of the cuticle, in negroes, accounts for the speedy desiccation of the pustule; which, in them, takes place

on the sixth day. He concludes this subject with expressing a hope, that ere long, people of all colours, and of all nations, will partake of the blessings promised by the discovery of Dr. Jenner, " The Universal Benefactor of the Human Race."

Dr. Moreau has recorded two instances, in which vaccine inoculation proved useful in other diseases, as well as a preservative from the small-pox. In one case, a scrofulous ophthalmia was cured; in another, the discharge from a fistula in the neighbourhood of the elbow, was lessened. The latter patient was inoculated, on a surface covered with an herpetic eruption. Others were inoculated with the virus, produced from this scrofulous and herpetic subject; without experiencing the least ill effect from that inoculation. This tends to refute, if it is necessary to refute, the vulgar error that the scrofula is infectious.

Dr. Moreau states, that the number of experiments which vaccine inoculation has undergone, amounted some months ago to upwards of two hundred thousand; and that it is now incalculable.

The minister of the interior has consulted the School of Medicine at Paris, in order to know whether it would be advisable, for government to distribute in the country the form of instruction, which the physicians of Geneva had addressed to the people, by the hands of the clergy. The learned body

whose decision was requested, answered in the affirmative.

The Prefect of the department of the Seine has also declared himself a friend to the practice; the advantages of which have been proved to him, by experiments performed in his own presence; and by putting vaccine patients to the test of variolous matter, taken from his own son; who was unexpectedly seized with the small-pox, and thereby deprived of the benefits of vaccine inoculation, which he would otherwise have partaken.

"This respectable magistrate," adds Dr. Moreau, "has since given fresh proofs of his philanthropy; by founding an hospital for vaccine inoculation; and favouring the central committee by all the means in his power.

"The municipalities have followed the example of the Prefect; and at this moment, in all the different sections, the committees of beneficence seek to communicate to all ranks of people a salutary practice; which the true friends of humanity fear, and not without reason, would otherwise be for a long time insulated, and confined to a small number of the privileged class,—who, with but few exceptions, have hitherto solely enjoyed the advantage of inoculation.

"The conduct of many other magistrates of the

French Republic, and that of different foreign governments, have also proved, that vaccine inoculation is a special object of solicitude to all those, who are truly worthy of the august function of ruling over mankind."

Dr. Moreau is of opinion, with many others who have deliberately considered the subject, that vaccine inoculation is a measure of public safety; and that government has as much right to interfere, and issue an ordinance for enforcing the practice, as to enjoin quarantine, or any other regulation which the welfare of the people demands.

The author does justice to the Duke of York, who has promoted this beneficial practice, not only in his own regiment, but also in that department of the public service, over which he so honourably presides. He likewise mentions the patronage which this discovery has received from the Lords of the Admiralty; who issued a similiar order for inoculating our seamen with the vaccine preventive. As to Dr. Jenner, the author is of opinion, that the benefit he has conferred on the whole human race, must ensure to himself a most glorious immortality.

Dr. Careno, of Vienna, whose classical translation of the two first parts of Dr. Jenner's Inquiry we perused with so much pleasure, has published a short original treatise on the same subject.

The author pronounces a just eulogy on Dr. Jenner; to whose indefatigable researches the world is so much indebted. He says, the cares of this learned physician for the interest of humanity have been recompensed; and crowned with the most happy success. He affirms, that Dr. Jenner, having inoculated, or caused to be inoculated, with vaccine virus, a considerable number of persons, has placed the three following truths beyond all doubt; first, that the Cow-pock is a light disease, secondly, that it is not contagious by effluvia, and thirdly, that it is a preservative against the small-pox.

The author is mistaken in supposing, that there is any establishment for vaccine inoculation in London, over which Drs. Woodville, Pearson and Simmons preside. Dr. Woodville is physician to the Small-pox Hospital, and Dr. Pearson is first physician to the Vaccine Institution. There is no other public institution in London, peculiarly devoted to this practice.

Dr. Careno is equally mistaken in supposing, that the soldiers, and their wives and children, whom the proper authorities have humanely directed to be inoculated in this manner, were inoculated at any public institution. It is true a considerable number, when in barracks at Chelmsford, were inoculated by Dr. Jenner, and Mr. George Jenner; in consequence of orders from the commander in chief. The rest, as far as I have been able to learn, have been inoculated

by the surgeons belonging to their respective regiments; except those in the Mediterranean, of whom an account has already been given.

Dr. Careno confirms the report of Dr. Reumont, that vaccine inoculation is practised in Spain. He also informs us, that Dr. Moreschi, who saw the practice of himself and other physicians of Vienna, and since introduced it into Venice, has published a work on the inestimable advantages with which this method of inoculation is attended.

Dr. Careno has given a long catalogue of professors, and other medical men of the first rank and abilities, who have done themselves the honour of introducing this unparalleled improvement of the healing art, into the different parts of the world. It was introduced into Giessen by a physician, and a military man, Captain Pilger; who thinks,

'Tis greater far to save, than to destroy.

The learned author says, he should never end, if he attempted to name all those who have introduced this practice into their own countries. For the same reason, I decline the task. It is, however worthy of being recorded, in the annals of vaccine inoculation, that the government of the Hague has recommended it in a circular letter; not thinking any discovery, which regards the health of the people, beneath their notice.

Dr. Careno says, "we remark with astonishment, that in the midst of the most dreadful ravages of a most malignant small-pox, eight hundred infants were preserved from its contagion, by the inoculation of the Cow-pox."—It is astonishing, that any one, who has read Jenner, can be astonished at this.

Dr. Careno has received positive intelligence, that vaccine inoculation has made a regular progress in Italy, particularly at Milan, Florence, Naples and Rome, in spite of the din of war.—We have also the respectable authority of the author himself for asserting, that Spain rivals other nations, in putting this salutary process to the proof.

"His Catholic Majesty, having seen Dr. Careno's translation of Dr. Jenner's works, in August 1800, ordered his prime minister to testify his satisfaction to Dr. Careno; and to inform him, that his Majesty intended to introduce vaccine inoculation into his dominions." Dr. Careno has also in his possession authentic proofs, "that Dr. Piguellem made experiments of this kind at Puigcarda, in December of the same year; and Dr. Salva wrote him word from Barcelona, in a letter dated the third of March, 1801, that vaccine inoculation was then in vogue at that place."—A Spanish translation of Dr. Colon's treatise on this subject, by Dr. Piguellem, was not long since announced in the Madrid Gazette.

The manual now offered to the world by Dr. Ca-

reno, deserves approbation. I hope, however, that in a future edition, he will not propose, for matter to be kept on a lancet; nor allow, that a deep insertion of vaccine matter produces a pustulous eruption. I hope also, that he will have the pustules in his plate copied from nature. Those in the present edition are copied from the production of an artist, who has not been fortunate in his attempt. One thing, however, we must admit; he has taken care not to break the second commandment.

I have now before me a letter from Dr. Walker to Dr. Jenner, dated, Camp before Alexandria, April 12, 1801; in which he says, he and Dr. Marshall, have completed the inoculation of the army and navy of the expedition; and that the admiral and commander in chief have given them very flattering certificates, of their zeal and success in the new practice. He was, at that time, not sanguine in his hope, of being able to establish vaccine inoculation in Egypt; and almost despaired of having an opportunity of using the matter, while it was good.

Here I beg leave to insert a remark of Dr. Haygarth, in his letter to Dr. Percival on the prevention of infectious fevers. "Among other causes of the wonderful achievements of the British fleets, it is not the least, that the sailors, during the whole war, have enjoyed a high degree of health. You will agree with me, that this happy circumstance is chiefly to be ascribed to the wisdom of medical regulations and

improvements; and you will not be displeased that I thus claim some, and no inconsiderable share of honour to our profession, from the late glorious victories of the British navy.

I have seen a letter from a gentleman of Plymouth to Dr. Jenner; informing him, that the physicians and surgeons who presented him with a gold medal, request he will sit for his portrait to Northcote. This compliment is worth recording; as it is an additional proof of the high estimation in which Dr. Jenner's discovery is held, by that respectable body of professional men, to whom the health of our seamen, the bulwark of Great Britain, is entrusted.

The author of the letter expresses a hope, that an early peace may divert us from the contemplation of scenes of destruction; and bring back our attention to the charms of science and preservation.

I have seen a letter from the Count de la Roque, who is now in London, stating, that he has received from Lyons information of the Cow-pock having been found not only a preservative against the small-pox; but also a corrector of some other disorders. A severe epidemic hooping-cough having prevailed there, it was observed by medical men, that those who had undergone vaccine inoculation, either escaped the disease altogether, or only had it in a mild degree.

The generous sentiment expressed by this illustri-

ous foreigner, reflects equal honour on himself and Dr. Jenner :—" With my heart and soul I unite with all those beings of sensibility, who in the effusion of their gratitude, cannot pronounce without respect and tenderness a name eternally dear to humanity,—that of JENNER!

Whether the physicians of Lyons formed a just opinion of what passed in that city, it is not in my power to determine. I am, however, rather inclined to suspect, from what I have seen, and heard from other quarters, that the mildness of the hooping-cough in those who had undergone the new inoculation, was rather a fortunate coincidence, than the natural consequence of the vaccine disease. Certain it is, that the human mind, when flushed with success in any new enterprise, is apt to be too sanguine.

Vaccine inoculation, however, still maintains its character both at home and abroad, as a preservative against the small-pox, when due care is taken to procure good matter, and to produce infection. Mr. Whately informs me, that Mr. Lyon of Tamworth, in Staffordshire, has introduced it into that town and neighbourhood, with the greatest success; and I have also received intelligence, that it was practised at Cricklade, while the small-pox raged there; and that it protected all those on whom it was practised, from the ravages of that dreadful epidemic.

When the beneficial consequences of this safe and

salutary operation are so well ascertained, surely all the members of society, and especially medical men, should vie with each other in their endeavours to promote it. Sorry am I to say, that our public institutions in general have not shewn much alacrity in adopting a practice, which promises in so considerable a degree, to augment the happiness, and ameliorate the condition of mankind.

I have known it alleged, as an excuse, that the governors of dispensaries were averse to the introduction of infectious disorders into those institutions. This would have been a sufficient apology, were the disorder proposed to be introduced, the small-pox or the plague; but not when it was the Cow-pox; the most harmless, as well as the most efficacious antidote, against the most infectious disorder in the world.

Surely it is the duty of every governor of a public institution, and of every medical man, who undertakes the sacred trust of the public health, to seize the earliest opportunity of giving a fair trial to every probable improvement in that divine art, on which so great a portion of human felicity depends.

It is but justice to the gentlemen of the Mary-le-bone Dispensary to state, that they were among the first to adopt this beneficial practice. It was also some time ago introduced by Mr. Ford at the Westminster General Dispensary. It is now intro-

duced into the Public Dispensary in Carey-street. The committee of that institution have circulated a paper announcing, that the physicians and surgeon of the charity, shall inoculate for the Cow-pox, all such persons as are recommended by the governors for that purpose.

This regulation is directed to be made known to the governors, and to the poor within the limits of the dispensary. I hope, however, the restriction here imposed will soon be removed; and that persons of all descriptions will be permitted to receive the benefit of this and other excellent institutions, as far as regards vaccine inoculation, without the trouble of procuring a letter; which many of the most proper objects know not where to procure.

In pursuance of the aforesaid resolution, the medical officers of the dispensary give notice, that all persons desirous of being inoculated for the Cow-pox, may attend at the dispensary for that purpose on any Tuesday or Saturday, at twelve o'clock; and earnestly "recommend the following facts to the consideration of all whom the subject may concern.

No one who has once had the Cow-pox can afterwards take the small-pox. This has been proved in many thousands of cases, in which persons, after having had the Cow-pox, have been inoculated for the small-pox, or have even lived in the same room, or lain in the same bed, with others covered with that

disease, and yet have not received the infection. This being the case, it is better to inoculate with the Cow-pox than the small-pox, for two reasons:

1. Because the Cow-pox is a milder disease. It occasions but little pain or fever, and is not followed by any of the painful and dangerous complaints, which are often produced by the small-pox.

2. Because the infection of the Cow-pox cannot be communicated by the breath or perspiration; whereas there is always danger that a person, who has even the inoculated small-pox, will communicate the disease to others; and in this manner the inoculation of one person has often occasioned the loss of a great number of lives.

We therefore advise all those, who regard the health and life of their children, the safety of their friends and neighbours, or the good of the community at large, to avail themselves of the opportunity now offered to them of preventing, by easy and certain means, one of the most loathsome and fatal diseases to which the human body is subject.

Signed, ROBERT WILLAN, T. A. MURRAY, } Physicians.
JOHN PEARSON, SURGEON."

This humane resolution was suggested by an ad-

dress of the medical officers of the hospitals at Manchester, whose names are already mentioned, in page 477. It has been circulated in the metropolis, by the Society for bettering the condition of the poor; who remark, that notwithstanding the advantage of inoculation for the small-pox, it is a melancholy fact, that the poor still suffer greatly by this disorder. Hence, the Society hope, the address of the gentlemen of Manchester may have the effect of producing similar offers from the hospitals, and other medical institutions in London.

The Manchester Address to the Poor is as follows:

"THE experience of several years has fully proved, that inoculation for the COW-POX, is a certain *preservative* agains the SMALL-POX; and is, besides so mild and safe a disorder, when compared with the inoculated small-pox, that it has been generally introduced among the better informed, and more wealthy inhabitants, both of this kingdom and of various parts of Europe. In order, therefore, to impress strongly on the minds of the poor, the usefulness and superior advantages of this new plan of inoculation, the medical gentlemen, whose signatures are annexed, belonging to these charities, have thought it their duty to state, in this public manner, the following observations for the serious perusal of all those poor persons, who feel *a proper affection for their offspring*, and who are desirous of promoting their own interest and comfort.

1. *Inoculation* for the *Cow-pox* has been practised for several years, with constant success, in various parts of this kingdom.

2. It has never failed to prevent the infection of the natural small-pox.

3. It may be communicated with safety to persons of every age and sex, and at all times and seasons of the year, with equal advantage.

4. The COW-POX is much preferable to the INOCULATED SMALL-POX, as being a milder and safer disease, and not capable of infecting the persons living in the same family, or even sleeping in the same bed.

5. It does not produce eruptions, which scar and disfigure the face; and is seldom, if ever, attended with any other marks of the disease, than what appear on the arms from inoculation.

6. Neither swellings, blindness, lameness, nor any other complaints, which are known frequently to be the consequences of the natural small-pox, and sometimes, though but seldom, of the inoculated small-pox, have been observed to follow the Cow-pox.

7. Alarming fits frequently seize children, when sickening of the small-pox; and while cutting their

teeth, this disorder often proves dangerous; but no such objections lie againt the Cow-pox.

8. So far from proving hurtful, delicate and sickly children are often improved in health, by having passed through this complaint.

9. Scarcely any remedy or attendance are required for the Cow-pox.

10. There is no necessity for a course of physic, either before or after inoculation.

11. The *time of the parents will not be taken up in attendance upon the sick*, to the injury of the support of the rest of the family: and to poor families, this is *an object of no small importance.*

The prejudices of the poor against inoculation for the small-pox, by which thousands of lives have been annually saved, have been often lamented; but if they suffer unjust prejudices to prevent their laying hold of the advantages, now offered to them, by the inoculation of the Cow pox, they will neglect the performance of a duty they owe to themselves, to their families, and to Society at large.—For surely it is little less than criminal, to expose their helpless children to the attack of so terrible and fatal a malady as the SMALL-POX, when it may be readily avoided by the inoculation of so mild, simple, and safe a disease, as that of the COW-POX.

N. B. All poor persons, whose affection for their families leads them to embrace this favourable opportunity, may have their children inoculated for the Cow-pox, at the Dispensary, from twelve to one in the afternoon, every day in the week, Sunday excepted, throughout the year. No time ought to be lost by the poor in freeing their families from the apprehension of the small-pox, which daily increases both in frequency and malignity, throughout this town."

Such are the concurrent testimonies of the most respectable part of the medical profession, in favour of the new practice. It is also sanctioned with the approbation of person of the first rank. The following is a letter from a noble earl to Dr. Jenner.

" *Crandford Lodge, July* 4, 1801.

" My dear Sir,

" You will, doubtless, be much pleased to hear of a circumstance that has happened in my family, to confirm in the most substantial manner, the power the Cow-pox possesses of preventing the small-pox.

" One of my housemaids was so unfortunate, some weeks ago, as to catch the small-pox; and after struggling with it for upwards of three weeks, in my house at this place, she at last became its victim. My youngest son, you know, was inoculated by you,

about a year ago, with the Cow-pox; and, about the same time, a maid-servant by Mr. Shrapnell, surgeon to my regiment; and another upwards of four years back, by some one in the country.

"As soon as matter could be procured from the servant-girl who had the small-pox, my son, and one of the girls who had previously had the Cow pox, were inoculated. The inoculated part looked red and angry, as if it would fester, for a few days; and then died away, without producing any effect. The other girl was repeatedly exposed to the infection of the small-pox, without inoculation, during the whole progress of the disorder; but has not felt any thing from it.

"I did not have the last mentioned girl inoculated, from a certainty, in my own mind, of the impossibility of giving the small-pox to those who have properly had the Cow-pox, having myself been witness, for these fifteen years past, to your persevering labours; labours, which have at length attained such perfection, that in a few years, the small-pox must be eradicated; and thousands of your fellow creatures annually will owe their lives to your discovery. I may add, that the child, and the other servant, who had been inoculated with small-pox matter, were also exposed to infection.

"These facts appear to me so very striking, that

I wish you to make them public, in any way which you may think proper. I am,

" Dear Sir,

" Your most obedient servant,

" BERKELEY."

" P.S. Allow me to mention, that there is an old servant in my family, on the verge of seventy, who had the Cow-pox, from milking cows, when a boy. From that time he has never been in the least cautious, in guarding himself from the small-pox; but has exposed himself again and again, without being sensible of its affects.

" I mention this circumstance, because, in conversation on the subject, I sometimes find, that the Cow-pox is supposed to be only a temporary security against the small-pox."

By letters received from Dr. Marshall we learn, that he is now at Naples; and that the Neapolitans are wise enough to avail themselves of the benefits of vaccine inoculation, though discovered by one heretic, and practised by another. Its effect appears to them quite miraculous; and it may be doubted, whether the blood of Saint Januarius is more celebrated in that city, for preventing an eruption of Mount Vesuvius, than the vaccine matter is, for preventing an eruption of the small-pox.

His Neapolitan majesty has appointed an hospital

at Naples, for vaccine inoculation; and has presented Dr. Marshall with a gold medal, in commemoration of the fortunate and auspicious era, when the practice was established in his dominions; accompanied with an eulogy on the discovery of Dr. Jenner; a discovery, which, from the critical juncture in which it was made, seems destined by Providence to recruit the strength, and restore the population of states, ravaged at once by war, and by that other scourge of nations—the small pox.

That it is adequate to this end, unless prevented by the folly and madness of mankind, continual experience and observation prove. Having made enquiries at Walworth, and other villages in the neighbourhood of this metropolis, in order to ascertain the success of my practice, I had the pleasure of hearing, that although the small-pox has since raged on every side, and frequently in the same house with those whom I had inoculated with the Cow-pox last year, and although the vaccine patients ate, drank, and slept with those who had the small-pox, yet they still resisted its contagion.

I have already mentioned, how unfortunate the first attempt to introduce vaccine inoculation at Woolwich turned out. We are informed by Dr. Rollo, that it is now introduced under the most favourable auspices; and with the most happy success.

This account is extracted from an article in the

Medical Review for June, 1801; where, as an argument in favour of inoculation, we are informed, that in the Royal Artillery Hospital at Woolwich, the natural small pox proves fatal to about half of those whom it attacks.

We have the authority of the same respectable publication, of the next month, for asserting, that the Cow pock inoculation has been introduced at Milan, and other parts of Italy; and that it has made a greater progress in Italy, than had previously been made by inoculation for the small-pox.

I lately received a letter from Mr. Masters, surgeon, of Watford, informing me, that a lady having been inoculated with vaccine matter, when ten weeks advanced in her pregnancy, from a fear of her catching the small pox, abortion took place on the twenty-fourth day from the imsertion of the virus. Whether it was occasioned by the vaccine inoculation, Mr. Masters does not pretend to determine. The inflammation of the arm was rather greater than in others inoculated at the same time; but not so considerable as to occasion the least alarm in the mind of the surgeon, to require any material treatment. It is proper to remark, that abortion had occurred in the same patient four times; the last of which was seven years before. This event, of which the cause is equivocal, when balanced against the number of fortunate cases on record, only proves, that no preg-

nant woman ought to be inoculated in any manner, unless exposed to present danger of the small-pox.

I have the satisfaction of hearing from Mr. Masters, that seventy-one paupers have been inoculated for the Cow-pox, by order, and under the immediate inspection, of the Rev. Mr. Vivian, rector of Bushey, in Hertfordshire; a man of great judgment, and extensive information. All these patients had the disease in the most mild and genuine form. Not a single pustule appeared; nor was there a single instance of inflammation in the arm, that required any particular management

Sixty-one of the patients have since been inoculated with matter of the small-pox, in its most recent and effective state; but not a vestige of that disorder was excited in a single instance.

During the whole existence of the vaccine disorder, the majority of these patients held the most familiar intercourse with many others who had not undergone that disease, and also with those who laboured under the natural small-pox; without communicating, or receiving infection.

Mr. Masters informs me, that, on account of the current of popular prejudice setting hard against the new practice, his experience has been limited to seventeen cases; and that nothing worthy of remark occurred in any one, except that before mentioned.

Having lately read in the Bibliothéque Britannique, that Mr. Coleman had succeeded in producing the vaccine disease in a cow, by inoculating a broad surface with the matter of grease, and that he had inoculated a child with matter thus generated, I wrote to him to enquire into the truth of this report; and he informs me, that it is unfounded. Mr. Tanner has succeeded in this experiment; and vaccine matter, sprung from that origin, which I received from Dr. Jenner, proved successful in the human subject; of which I first published an account in the Medical Review, which may be found in the 305th page of this treatise.

Another instance of Mr. Tanner's success may be found in page 336 of the present treatise; taken from the Comparative Statement. A second edition of that work is now published. Mr. Paytherus avows himself, and any man might be proud to avow himself, the author. In addition to the former contents of this work, the author has endeavoured, as I have endeavoured, to unravel the plot of the "Tragedy of Errors," acted at a neighbouring village, under the title of "Inoculation for the Cow-pox."

Reports of vaccine inoculation having failed to prevent the small-pox, in three cases, at Oxford, have reached this metropolis. One of the patients was inoculated by the Rev. Mr. Jenner; and Dr. Jenner, to whom he shewed the case, agreed with him, that there was a sufficient deviation from the regular pro-

gress of the pustule, to warrant suspicion. I am likewise assured by Dr. Jenner, that when the arm was examined, not the least vestige of inoculation was discernible. This, every one who is conversant in inoculation will allow, proves fatal to the report.

The two other patients, I am informed, were inoculated by a very young man; who had no accurate recollection of the particulars; and, being asked on what day the efflorescence appeared, replied, he thought it was on the sixth day that it became extensive.

This enquiry, like others of a similar kind, redounds to the credit of vaccine inoculation; for several children, who had been inoculated at the same time by Mr. Jenner, and pronounced secure, slept in the same room, and some of them in the same bed with the variolous patient, during the whole progress of the disease; yet escaped unhurt.

I have seen a letter, which stated, that twenty failures had happened in the practice of one physician, at Aberdeen. If this be true, I can easily suppose, all the rest of his inoculations will be found to have failed; and hope, that in justice to his patients, he will inoculate again such as have hitherto escaped the small-pox.

Dr. Hooper informs me, that when he was at Oxford, he made enquiries concerning the cases which

occurred there. The mother of the children inoculated by Mr. Jenner told him, the only difference that she observed between the pustule in the patient who has since had the small pox, and the others, was, that it was smaller than the rest. I have no doubt but it was a spurious pustule.

Thus it appears, that a deviation from the regular progress of the disorder was observed by different persons. The practice is now much better understood, than it was at that time. Experiments have been multiplied a hundred-fold; and the diagnostics of the genuine and spurious vaccine pustules are much more accurately defined. I cannot, however, help recommending one precaution, which is, that every vaccine inoculation should be performed, with a single puncture, *in both arms*, a method I have almost from the first pursued; and, that even then, if there is the least reason to doubt whether it is effectual, the operation should be repeated with all possible care.

In the Medical Journal for August, is a letter from Dr. Fawsett, of Horncastle, containing the history of some cases of the spurious Cow-pox. This communication I consider valuable, on account of its confirming an opinion I have long entertained, which is, that in the spurious Cow-pox, the areola is not always characterised by a variety of tinge. In the cases detailed by Dr. Fawsett, no such variety could be discerned.

The areola, however, was rather smaller than it commonly is; and sooner became stationary. The patients were inoculated by means of thread; and consequently by incision; which, owing to accident, was in one instance deeper than it ought to have been. These inconveniences may be prevented; by taking matter on a lancet, either from the arm, or from glass; and inserting it by means of a slight and simple puncture.

In one of the cases, a minute vesicle appeared; but it was more transparent, more globular, and had a thinner pellicle, than that which marks the true vaccine pustule. It was occasioned by erysipelatous inflammation; excited by the patient's rubbing her arm considerably. This took place on the fifth day, not on the fourth as the latter states; since inoculation was performed on a Sunday, and the friction took place on the Thursday following. Such a trivial error would scarcely be worth noticing, were not every thing worth noticing in a new practice, on which the health of the present generation, and of all posterity depends.

I shall, however, embrace the present opportunity of remarking, that I have frequently known the same erroneous mode of calculation employed, as well in other branches of the practice of medicine, as in this. In this, it is of real importance to recollect, that in our calculations, the day of inoculation, as the first, must be included; otherwise we shall not only be

incorrect in our reports, but commit continual mistakes in taking matter for inoculation; as too many have already done.

Dr. Fawsett expresses a fear, that *till better means of preserving the matter are discovered, the progress of vaccine inoculation in the country will be but slow; notwithstanding every day's experience should continue to confirm its importance.*

This is but an indifferent compliment to the public spirit, and even to the good sense, of the good people of this country. What! because a man of fortune has had the small-pox, and his family have had the small-pox, or that equal security the Cow-pox, will he be perfectly regardless of the health of his domestics, his tenants, his labourers, and the community at large? Will he hear, that thousands are perishing around him, and not stretch forth his friendly hand to save them?

Should other means of introducing the practice, in any particular part of the kingdom, fail, it is well known that it is established in almost every principal town in Great Britain. From the success that has attended the insertion of dry matter, sent to various distant parts of the world, I will venture to affirm, that in any part of Europe, even with such matter, where skill in the operator is not wanting, success in the operation will not be long wanting.

If, however, it should in any case prove otherwise, nothing more is necessary, than to send a single person, who has neither had the small-pox nor the Cow-pox, to the nearest place where the vaccine inoculation is at that time practised; who may, if convenient, remain under the inspection of some inoculator till the success of the operation is certain; and then convey the fluid matter to any place where it may be required.

The expense attending this plan, even if it were found necessary to adopt it in every parish throughout Great Britain, would be so trifling, that it may be doubted whether on that account, any nobleman or gentleman would be obliged to deny himself one of the necessaries or comforts of life, and to keep a single mistress, carriage, horse, or dog the less; or whether any person of fashion would be obliged to discontinue wasteful and extravagant suppers, in a time of famine. Nay, if the expense were to be borne by the parish, it may be doubted, whether the parish-officers would deprive themselves, on that account, of a single feast.

But I should not envy the feelings of that man, or body of men, to whom the power of alleviating so great a portion of human misery will not afford greater pleasure, than any selfish gratifications can bestow.

In the same Journal is a letter from Mr. Blount,

surgeon, of Birmingham, giving an account of the success attending the practice of vaccine inoculation in that town; and adducing the most satisfactory proofs of the power which the Cow-pox possesses, to render the patient insusceptible of the small-pox.

The same publication contains a letter from Mr. Clutterbuck, exhibiting a detail of an unfortunate case, in which vaccine inoculation was followed by violent inflammation of the arm, neck, &c. At this we cannot wonder, while two punctures or more continue to be made on one arm; nor at the long continuance of inflammation, when all the dictates of reason and experience are set at nought; and hot fomentations are employed, in order to add fuel to the fire. Nor can we wonder, that a fatal anasarca should be the result. It is a little remarkable, that in the other cases to which Mr. Clutterbuck refers, in order to vindicate the treatment of this case, and to transfer the blame from the practitioner to the practice, the rules laid down by the most successful inoculators were equally set at defiance.

Mr. Clutterbuck thinks it almost superfluous now, to adduce evidence in favour of the new inoculation; an opinion, in which he is certainly too sanguine, even supposing the practice to deserve none of those imputations which he has laid to its charge. He is, however, convinced of the permanency of the preventive power of the vaccine inoculation; and has brought forward evidence in favour of that opi-

nion. "Two servants of Mr. Cater, of Gracechurch-street, were inoculated with vaccine matter, the one two years and a half, the other fifteen months ago. They have both lately been employed in nursing a child in the small pox, with a numerous crop of pustules; and neither of them has suffered."

In the same Journal are the histories of two cases, published by Mr. Stevenson of Kegworth, to shew that the practice of vaccine inoculation is not yet brought to the zenith of perfection; an opinion which I shall not attempt to invalidate. If Mr. S. is accurate in his report, two instances occurred, in which the pustule went through its regular stages; and the patients, when inoculated six months after with variolous matter, received infection; which was evinced by a pustulous eruption.

Mr. S. says, he is aware, the abettors of the new system will ascribe the want of success, in these two cases, to the degenerated state of the matter employed; and a want of discrimination between the genuine and spurious Cow-pock. According to this mode of reasoning, he himself would argue in that way; for he says, he has transmitted the cases, not with a view to depreciate this grand innovation in medicine; or to prejudice the minds of benevolent parents, anxious for the welfare of their tender offspring, against its further propagation. On the contrary, he feels "sincerely disposed to congratulate the world at large, on the happy introduction of the Jennerian

inoculation; from a conviction, that in various and important particulars, it holds a decided preference over the small pox; which disease will probably, ere long, be completely exterminated, and be known to future ages, as the leprosy is to us, only by tradition."

Mr. S. therefore declares, that so far is he from wishing to check the extending empire of its benign influence, that he publishes the foregoing cases, only as a corroboration of the close analogy that subsists, in various relations, between this new disease, as he calls it, and the small-pox.

Mr. S. considers these cases as failures of the Cow-pox; and is desirous of stimulating those who have sufficient opportunities for the purpose, to make farther enquiries; and point out other characteristics, which may enable practitioners to recognize, when it will certainly prove efficacious, as a guardian to the constitution against the subsequent agency of variolous contagion.

It is proper to remark, that symptoms of constitutional affection were not wanting; that the matter with which the patients were inoculated was taken, in one instance on the eighth, and on the other on the ninth day; and that the person from whom it was derived, when inoculated with variolous matter, proved insusceptible of infection.

That the two other subjects had the real small-pox, Mr. S. says, cannot be doubted, since many children were inoculated *successfully* with matter taken from one of them. He probably means, they were inoculated successively. I cannot, however, help saying, that such is my confidence in vaccine inoculation, and so frequently have I known the chicken-pox mistaken for the small-pox, that I am much more inclined to believe, successive mistakes have been committed in that respect; than that two successive failures should have occurred in the practice of one gentleman, when others have inoculated thousands without a single failure.

But should it prove otherwise, it is acknowledged on all hands, that such apparent failures frequently occur in variolous inoculation; which Mr. S. candidly confesses. It is, therefore, evident, that if no mistake has happened in these cases, we ought no more to reject or depreciate vaccine inoculation on that account, than any of the other blessings which Providence has bestowed on mankind; because none of them are free from some alloy.

There is a note of the editors, in page 121, in which they assert, "that *proper* virus, inclosed between two glass plates, may be sent to China, and never fail to communicate the disease." This, however, is rather too much to warrant; since we have no proof that the experiment has hitherto been tried; and since we know, that the most perfect matter pos-

sible, sometimes fails to communicate the disease, when immediately transferred from arm to arm. If, therefore, this opinion of vaccine matter could be proved to be correct, we might say, *vires acquirit eundo.*

By the Medical Review for August, 1801, we learn, that the Medical Society of Emulation at Paris have nominated citizens Alibert, Du Prest, Bony, and Richerand, as a committee, to inoculate the poor of Paris gratuitously for the Cow-pox.

Thus we perceive, our Gallic neighbours, forgetting that this discovery was made by a native of a country, with which they are unfortunately at war, and animated with the genuine spirit of patriotism and philanthropy, have not only adopted this practice; but, as we have recorded before, and now record, their learned societies, and public bodies of medical men, so far from deeming this subject foreign to the nature of their institutions, so far from waiting till the experience of private individuals has decided the question, and so far from standing unconcerned spectators, while suffering humanity claims their assistance and compassion; have voluntarily stepped forward, and exerted themselves in the glorious cause. It will be happy for other nations, if other learned societies have no reason to blush, for not having set, or followed, such an excellent example.

Dr. Jenner has lately received an address from Dr. Guatieri Mantillari Segro, the delegated physician of the department of Ancona, in the Cisalpine republic. It is to the following purport.

" The facts which you have disclosed to the world, have induced mankind to offer you their most grateful acknowledgments; and invited every considerate person, every friend to man, and every wise physician, to follow your steps.

" The Vaccine pock, it is true, preserves from the infection of the small-pox; but it is not easy to procure the genuine matter of that infection; on which account it is, that I doubt very much the success of the experiments and observations made on that disease here, and also in Germany, France, and other places.

" In order to clear up every doubt on the subject, and to meliorate the condition of my fellow-citizens, I have determined to undertake a new course of experiments on the Cow-pock, together with the most able physicians of my department."

To enable the author of this letter, and his colleagues, to institute a series of experiments, Dr. Jenner is requested to send them some threads charged with the matter from which the vaccine disease is supposed to spring; and also some Cow-pock

matter, both of the genuine and of the spurious kind.

The address concludes with a high encomium on that man, to whose distinguished talents, unwearied exertions, and sincere philanthropy, we are confessedly beholden, for the most valuable and important discovery that has been made, from the creation of the world to the present time.

The following are additional proofs of its utility; which have occurred in my own practice.

Mrs. Nibbs, of Crown-yard, Swallow-street, having heard various false reports concerning the subject, wished to ascertain, by actual experiment, what security her children had derived from vaccine inoculation. Accordingly, she had them conveyed to an apartment, where the small-pox was, and suffered them to remain half an hour; but without producing the least effect.

Mrs. Russell, of the same place, made the same experiment; and with the same result. The children of Mr. Thurkell, and of Mrs. Plant, at Mr. Eddy's, in Swallow-street, have been exposed to the same infection, and with the same success.

The child of Mr. Field, at No. 16, East-street, Manchester-square, having undergone vaccine ino-

culation, was several times carried to places where the small-pox raged; and every effort was tried, in order to infect it, but in vain. An infant of Mrs. Taylor, No. 21, Mary-le-bone-lane, was subjected to the same trial; and with the same auspicious event.

Dec. 3d, 1800, I inoculated with the Cow-pock virus a child of Mrs. Pikeland, in Emanuel-court, Southwark. At that time Mrs. Pikeland had a nurse-child labouring under the confluent small-pox, which had appeared two or three days before, and proved fatal a few days after. Her own child, though nursed at the same breast, and living in the very focus of infection, escaped the disease.

A child of Mr. Henley, in Woodstock-court, Woodstock-street, near Bond-street, whom I inoculated with the Cow-pock in the spring, having resisted all attempts to infect it with the small-pox, Mrs. Henley advised her sister, Mrs. Enghausen, of Dean-street, Soho, to have her infant inoculated in the same manner. In consequence of the small-pox happening to break out in the house, her persuasions at length prevailed.

When vaccine inoculation was performed on this infant, the small-pox had appeared six or seven days; but in a distant part of the house. As soon, however, as the signs of infection appeared, Mrs. Enghausen, without my knowledge, began to expose the child, as frequently as possible, to the variolated at-

mosphere. It was suffered many times a day, to inhale the breath, and all the tainted effluvia of a patient labouring under the most malignant small-pox; but, in this instance also, the triumph of vaccine inoculation was complete.

In the Recueil Périodique for May, 1801, the Committee for Vaccine Inoculation at the Louvre, have inserted a memorial, stating, that in order to fulfil the task assigned to them, they had collected all the facts which could enable them to judge, how far this discovery may be useful. Several of their members have had occasion to observe, in individuals of every age, and of both sexes, an eruptive disease, which the knavery of some, and the ignorance of others, have termed the small-pox.

This disease, which is of the phlyctenous, or vesicular kind, manifests itself by an eruption, which is at first red and solid. Then the cuticle separates from the skin, and is filled with a serous fluid. When this affection happens in those who have been inoculated for the Cow-pock, it is converted, by the prejudiced and malevolent, into a reproach on the practice.

This epidemic, which, they say, now reigns at Paris, is probably the chicken-pox, which is equally prevalent in London; and has here also given rise to a number of false reports. This is not much to be wondered at, when we consider, how imperfectly it

has been described by authors in general; and how little it has engaged the attention of medical men.

To that able and experienced physician, the late Dr. Heberden, we are indebted for the greater part of what we know of this disease. In the first volume of the Medical Transactions is a memoir, in which he gives his opinion, that the chicken-pox and swine-pox differ only in name; and that it is of importance to understand the distemper, to prevent it from being confounded with the small-pox. It is now more necessary than ever, to make an accurate discrimination between those two disorders, when, in consequence of prejudices that still prevail, in the minds of too many persons, a thousand instances of success in the new practice, or even a thousand lives thus preserved, in their opinion, would not atone for a single failure.

The mildness of the constitutional symptoms, the early appearance of vesicles, filled with a colourless or serous fluid, and the rapid progress to a state of maturity, or the rupture of those vesicles, are the well-known diagnostics, by which the chicken-pox may commonly be distinguished from the small-pox; provided the person who is consulted, has an opportunity of seeing the disorder in its different stages; but it is justly observed by the learned author before mentioned, that physicians are seldom applied to on these occasions; and therefore mistakes are the more likely to be committed.

Dr. Heberden says, he has known these pocks make their first appearance on the back; "but," he adds, "this perhaps is not constant." From numerous enquiries and observations I have reason to believe, that this eruption commences full as often on the face, head, or abdomen, as on the back; but, like the small-pox, it generally appears on the extremities last.

Dr. Heberden says, he never saw the chicken-pox confluent, or very numerous; and that the greatest number which he ever observed, was about twelve in the face, and two hundred over the rest of the body. Many persons, however, of much less eminence in the medical profession, and who on that very account are, perhaps, more frequently consulted in such trifling disorders as the chicken-pox, have seen the eruption in some measure confluent, and far more numerous than Dr. Heberden ever happened to see it.

It is with deference to such high authority, I must add, that sometimes the vesicles contain a fluid of a puriform appearance; and, that instead of one or two pocks, I have known a considerable number leave a cicatrix behind. I have also known some persons suffer much more by this disorder, than the learned author seems to allow.

The learned author says, it is totally different from the small-pox; yet he speaks of it, as having a great similitude to that disease; as being likely to be mis-

taken for it, and as having actually been mistaken for it by Morton and many others. Hence he thinks it probable, that many persons have been inoculated with the chicken-pox instead of the small-pox.

If we seek for an account of this distemper in the works of the most celebrated nosologists, we shall find, that few of them have mentioned even its name. Vogel, indeed, speaks of it as a spurious kind of small-pox; a name by which it is frequently designated by writers on the Continent, as well as by some of our own country. He says, it is attended with an ephemeral fever, *pustules very much resembling those of the small-pox, itching, on the first day breaking out and coming to suppuration, on the third day drying and falling off; the* WHOLE DISEASE *terminating within seven days at the farthest.*

To this description of the disorder, in Cullen's edition of Vogel's Nosology, a note is added, expressing the same opinion which Dr. Heberden had before expressed, that medical men were often deceived by the chicken-pox, from its assuming the appearance of the small-pox; and thence it was imagined, that the same persons had the small-pox more than once.

Vogel says, the chicken-pock is *an acute pustule, similar to that of the small-pox; and* "*that it is not infectious.*" No greater proof can be given, that the

learned professor was but little acquainted with the disease.

Cullen says, this disease is a synocha; that it is attended with a papulous eruption, appearing after a slight fever, of short duration, *scarcely running into suppuration;* in a few days terminating in small scales, and leaving no cicatrix behind.

Dr. Heberden observes, that these pocks are generally ruptured, either by friction of the clothes, or of the patient's hands, endeavouring to allay the itching which attends the eruption; but that, some few escape; in which the fluid becomes "*yellow and thick, and is dried into a scab.*" This is what occasions the common mistake of medical men and others; who seem in general to be totally ignorant, that the chicken-pox ever assumes that appearance. This is the disease which they call a mild species of small-pox. We need not wonder, that it never proves fatal.

The learned physician last quoted says, the contents in the vesicles *do not seem* to be owing to suppuration. Any person who compares the accounts here given, will soon perceive how much they are at variance in this respect. If, however, appearances are not more deceitful in this disorder than in any other, suppuration is no unfrequent occurrence.

Dr. Heberden remarks, that, "as the true skin is so little affected, no mark or scar *is likely* to be left;

unless in one or two pocks, where, either by being accidentally much fretted, or by some extraordinary sharpness of the contents, a little ulcer is formed in the skin."

It is of small consequence, by what means such a trifling blemish is occasioned. I should, however, not suppose, that in any case of the kind, there is any peculiar acrimony in the varicellous fluid. Certain it is, that in many cases, a much greater number of cicatrices are left behind, than Dr. Heberden supposes; and it is rather surprising, that Dr. Cullen should have seen so little of the distemper, as to deny that it ever leaves one.

The resemblance of this disease to the small-pox is, as Dr. Heberden justly observes, the principal reason why it is necessary to distinguish it from other eruptions; but it is not to be despised on its own account. I have frequently known troublesome ulcerations, *tinea capitis*, and other inconveniencies occasioned by it; especially among the children of the poor; who, whatever restraints they labour under in other respects, are commonly allowed the luxury which has been thought too great for any subject, that of scratching wherever they itch.

The following instances of mistakes arising from the similitude between the two diseases before mentioned, were this day communicated to me by Mr. Paytherus.

When he practised at Ross, an elderly surgeon, with whom he was in partnership, inoculated his grand daughter with supposed variolous matter; and shewed the case to his friends, as one of very mild small-pox. Mr. Paytherus having expressed his doubt, whether the disorder was the small-pox, gave great offence. About three years after, the young lady had the small-pox, of the confluent kind.

This man of Ross pronounced another case of chicken-pox, concerning which he was consulted, to be a case of small-pox. Mr. Paytherus informed the parents, it was nothing but the chicken pox; and, inoculating the patient soon afterwards with proper matter, produced the small-pox.

These, and a number of other instances, convince me, that this error is one of the most common that are committed. It is also, alas! one of the most fatal. A melancholy case occurred in this town, about four years ago. A lady who was going abroad, had her daughter inoculated by one of those impostors, who, having swept out a drug-shop for some years, called himself an apothecary. When the young lady returned to England, she caught the small-pox, and died. One catastrophe of this sort, is sufficient to impress every feeling mind with the weight and importance of the subject.

In the second volume of the Medical Essays, is an account of what is there termed an eruption *like*

the bastard, or chicken, pox. It was vesicular; the eruption continued four or five days; and the disease disappeared about the ninth day. I believe, no person, who has often seen the chicken-pox, will entertain a doubt of this being really that distemper.

Dr. Monro, in his Account of the Inoculation of Small-pox in Scotland, says, "I have been several times told by parents and relations, that the children under my care in the *true* small-pox, had formerly undergone that disease. But, upon my desiring them to recollect, whether the same individual pimples had, in the former disease, remained turgid till at least the seventh day of their eruption, as they might see the present ones would do, or whether there was only a succession of pimples, each of which collapsed on the third, fourth, or fifth day after its eruption, and by their succession maintained the appearance of turgid pimples on some part of the skin during *eight*, *nine*, or *ten days*,—they acknowledged, that each of the pimples in the former disease seemed ripe, and collapsed, before the seventh day; and thence I concluded that former disease to have been one of the *bastard* kinds of small-pox."

To this paragraph Dr. Monro subjoins a false report of a child, who was said to have died of the small-pox a year or two after having this disease by inoculation. On enquiry he found, that although the child had been inoculated, infection had not taken place; of course no blame could deservedly

attach to inoculation. Yet this idle and impudent report, like those of the present day, served to check the progress of a most beneficial practice; and to prolong one of the greatest miseries of mankind.

Dr. Monro speaks of a child, who had the *bastard* small-pox, having had a *smart* fever before their eruption.—This I consider worth mentioning; because it is generally imagined, that the chicken-pox is never a severe disease; and that opinion has been a very prolific source of error.

Sauvages has not described this disease under any generic name; but mentions it as a species of small-pox, by the title of *Variola Lymphatica.*

Never, perhaps, was there an affection of the human body so apt to be mistaken as this; nor one less accurately described, than this has commonly been.

Its duration, as well as that of the small-pox, is variable. Instead, however, of the whole disease terminating within seven days at the farthest, as asserted by Vogel, it sometimes continues twice as long. An instance of this lately occurred, in a child of Mrs. Alsop, at No. 5, Orange-court; in which the eruption was not complete till the tenth day; and the last vesicle did not disappear till the fourteenth.

In the same number of the Recueil Périodique, is a memoir on the subject of vaccine inoculation, published by the Central Committee appointed for that purpose; in which they vindicate the practice from various charges again brought against it by Dr. Vaumes, an inoculator for the small-pox; who knows the value of that practice too well, to resign it without another struggle.

Accordingly, he revives reports which are already refuted. He states that persons have had the small-pox after the Cow-pox, who have either not had the small pox, or not had the Cow-pox, or not even been inoculated for that disease.

He magnifies every little accident which happens; and attributes all to vaccine inoculation; as if it could be expected, that this process had the power of protecting the body from every other disorder.

He avers, that a child was successfully inoculated for the Cow-pox; but the Committee have in their hands a certificate to the contrary, signed by the father of the child. This proves, that he has something to learn from the antivaccinists on this side of the water; who generally take care to conceal the names of the parties, in whom they pretend the practice failed, lest it should lead to a detection of their falsehoods. Let him follow their example; and then, if his present trade should fail, and fail it must,

he may hope to be appointed *editor of the Brussels Gazette.*

He must, however, not exceed the bounds of probability quite so far in future, if he wishes to be believed. He pretends, he has received information from Geneva, that when the small-pox committed such havoc there, those who had been vaccinated were no more secured from its ravages than others.

It is a little unfortunate for citizen Vaumes, that at the very time when he published this assertion, the Committee had received from Dr. Odier, and the other physicians of that city, the most positive assurances of the contrary; and no one who knows the celebrity of Dr. Odier, and the esteem in which he is held throughout Europe, will dispute his testimony.

By a letter from him, in the spring of 1801, the Committee are informed, that of eighteen hundred persons who had been inoculated with the Cow-pox at Geneva, and in its environs, not one had caught the small-pox, either by means of inoculation, or of exposure to the natural infection, when that epidemic universally prevailed.

Citizen Vaumes has quoted Dr. Woodville's first publication, to prove that the vaccine disease is often attended with a considerable pustulous eruption; but

he has not quoted Dr. Woodville's second publication, to prove the contrary.

Having made these observations on the pitiful performance of citizen Vaumes, "the Committee avail themselves of that opportunity, to announce to the public the new testimonies they have received, in favour of vaccine inoculation. At this moment, the practice is adopted in all the departments of France. They are informed, that it has been employed with success, and that none of the subjects who have been submitted to it have taken the small-pox; although many of them have since been inoculated with it; and although, for the most part, they have lived in the midst of the contagion of that epidemic."

The Emperor of Germany has given a fresh proof of attention to the health of his subjects, in addition to that which I have already recorded. He has appointed a committee of some of the most skilful physicians; under whose inspection and care, thirty children are to be inoculated for the Cow-pox. The committee is ordered to report to his majesty their manner of proceeding, their observations, and the result of them. He who thus makes the welfare and happiness of his people the constant objects of his paternal solicitude,

"Had been an emperor without his crown."

While vaccine inoculation is practised under such auspices, on the continent of Europe, it derives no

less honour from the patronage it has there met with, in the republic of letters. Among other able champions who have risen to plead its cause, Dr. Colladon, of Paris, deserves to be mentioned in the first rank. He has published a small popular treatise, under the form of letters to a lady; in which he has divested the subject of technical and abstruse terms; and given a very happy specimen of the *suaviter in modo, fortiter in re.*

He represents the lady, as consulting him on account of her children; for whose sakes she is in a state of anxiety; the small-pox having appeared in the neighbourhood. Knowing what argument was most likely to prevail, he conjures her as a physician, and as a friend, to adopt vaccination. If, says he, I can persuade you to follow my advice, I shall preserve your children, *I shall preserve the beauty of your daughter;* and your common happiness will be my reward.

After describing this mild affection in an easy and familiar style, he gives a short account of the different experiments made, in order to ascertain its utility. He then expatiates on the zeal with which this valuable discovery was adopted by the Medical Society, and the Committee of Vaccine Inoculation, at Paris; and the success with which the practice had been cultivated, in all the principal countries on the continent of Europe.

He expresses a hope, that his friend will entertain a regard for Dr. Jenner; who, by a substitute so trifling, as hardly to deserve the name of a disease, has enabled us to secure ourselves from one so formidable and inevitable as the small pox. You will bless him, says he, when you consider, that there is no day in which he does not preserve some life; you will also bless him, when you have inoculated your children according to the method he has proposed.

He contrasts the Cow-pox with the small-pox, from which, he observes, scarcely any one is exempt; and in which, besides other inconveniences, the danger increases with the age of the subject. He reminds his friend, that it is not long since she beheld this dire pestilence, when it carried off a greater number of inhabitants in that capital, in a single season, than all other diseases, put together, carry off in a year.

He tells her to consult other medical men. There is not one of them, adds he, who, having seen vaccine inoculation with *a disinterested eye*, is not convinced of its efficacy; and every day confirms them in that opinion.

He concludes this part of his address with an earnest and pathetic appeal, to the feelings and understanding of his friend.—"I have disclosed to you," says he, "the truth: I have told you nothing which

I have not seen and practised. I offer you a simple and sure mean of saving your family; and I have for my authority my own experience, and that of all enlightened medical men. If you accept my proposal, you will rescue your children from certain danger; you will live in a state of happiness and tranquillity; and thank me for my advice.

" Permit me to tell you, Madam, it is your duty to follow it. The small-pox is in your neighbourhood, your children may be infected with it,—and if they are, it will be your fault: and what a fault,—what a reproach—for a mother! But I shall be silent: you are sensible; and you understand me. It is indeed time: in a few days it may possibly be too late."

In his third letter Dr. Colladon represents his fair friend as having formerly objected to variolous inoculation, as being more dangerous than useful. " If you preserve certain individuals, you injure the species. You propagate a disease instead of extinguishing it; and cause an epidemic where it would not have existed but for you." To this he had replied, that he never expected to destroy the disease by the disease itself; but considered inoculation of the small-pox as the only means of diminishing its ravages.

" We then," says he, " ran over the different plans proposed by physicians and philosophers for the ex-

tirpation of the small-pox; and found them all insufficient and impracticable. We parted, convinced that in the actual state of society, it was impossible to rid ourselves of this malady."

Dr. Colladon falls into the common error of his countrymen, that the Cow-pock was confined to the county of Gloucester.—He says, he is sensible that ages sometimes pass away, before truth is acknowledged; and that nothing is more obstinate than prejudice; yet he has no doubt, that time will remove all objections to the new practice, and that it will be of such importance to the state, as to engage the attention of government, and become an object of general police.

After dwelling with rapture on the happy consequences that will flow from this discovery, the ingenious author proceeds, "If, for the good of humanity, some sacrifice were necessary, you would not hesitate to make it. In the present instance, however, you have nothing to do, but to contribute to the happiness of the public by ensuring your own."

The last letter, which is an able answer to the various objections that have been urged against the practice by prejudice, ignorance, and self-interest, both on this and the other side of the water, concludes in the following manner. "The fact is, that no rational objection can be made to vaccine inoculation. It has all the force of evidence in its favour.

It spreads in the metropolis; it is received with joy in the departments. At Rheims it has arrested the progress of an epidemical small-pox. At St. Quentin it is practised with the greatest success by Dr. Colon. In a short time it will be generally adopted; and then, those who refuse to listen to good advice, may possibly repent. The small-pox reigns in Paris. I shall not renew my fears; you are warned of your danger; it is your duty to prevent it."

A longer extract from these letters would exceed the limits of this work. Suffice it to say, they contain in a small compass the quintessence of all that has been written on the subject; and are worthy to be translated into every language. Though modest in size, they are one of the most valuable acquisitions that medical literature can boast.

An "Historical and Practical Essay on Vaccine Inoculation" was lately published at Brussels, by M. Fournier, first surgeon of the military hospitals in that city, and member of several learned societies.

Mr. Fournier observes, that "no question of greater importance, or more interesting to society in general, was ever agitated, than that of determining, whether vaccine inoculation is capable of preserving the human subject from the small-pox."

When an account of this singular discovery was

first published, he " scarcely dared to believe it; but made his ardent vows, that the miraculous advantage of the practice might be verified in a positive manner by time and experience, the only undeniable judges in the healing art."

From that time, the learned author endeavoured to collect every thing that was written on the subject. The English and French journals furnished him with information, which inclined him to favour the practice; and different conversations with learned men returning from London, induced him to rank himself among the partisans of vaccination.

He resolved, by practising it himself, to repeat the experiments already made; and thereby to prove for a certainty, how far it merits the confidence of the public.

He could not procure vaccine matter till the end of February, 1801. His experiments commenced at that period; " they have been multiplied, and crowned with constant success."

Citizen Doulcet, Prefect of the department of Dyle, to whom he communicated the result of his operations, judged that the publication of them would contribute to the propagation of the practice; which he had favoured in a singular manner. This encouraged the learned author to bring his Essay to

light, in order to fix the public opinion in that part of the world, which was still wavering.

He was resolved " to stem the torrent of those absurd calumnies, which jealousy invents; and which are the greatest obstacle to the general adoption of a practice, the incalculable advantages of which are no longer problematical to any man, who is not warped by passion."—" If," says he, " I have succeeded in this attempt, my wishes are accomplished; I am ambitious of no other glory."

The learned author asserts, that vaccine inoculation will render the end of the eighteenth century for ever celebrated; that it is the most useful of all the discoveries made in medicine; and that which most immediately tends to the preservation of the human species. " Thanks be given to Dr. Jenner: his name will be transmitted to posterity by the grateful acknowledgments of all nations."

Citizen Fournier considers the small-pox " as the most cruel, and the most dangerous, of all the diseases that afflict humanity; as a destructive scourge, whose ravages are more terrible than those of all other diseases put together."

He observes, that inoculation of the small-pox, for which we are more indebted to chance, than to the researches of learned men, has modified its violence; but ignorance, prejudice, and *avarice*, re-

tarded its propagation.—He adds, " the most numerous class of society, that of the people, enjoyed no part of its advantages; but rejected, with a kind of horror, every proposition for inoculating them; at least on the continent of Europe."

He says, the alarming mortality which the smallpox lately produced in Paris, has awakened the attention of the French government. I hope the alarming mortality which has prevailed in other cities, and in other countries, will awaken the attention of other governments; and that the favoured land, where the finger of Providence *first* pointed out the blessing, will not be the *last*, to avail herself of its full advantage.

M. Fournier asserts, that this happy, and inestimable discovery, has surpassed all the hopes we dared conceive; and excited a sacred enthusiasm in every breast, where sensibility resides.

By the testimony of this respectable author it appears, that " the National Institute of France, the School of Medicine of Paris, many learned societies, and a considerable number of private practitioners, have examined with attention, and performed anew, the experiments on vaccine inoculation; and that their reports confirm what the English had said concerning its virtue."

He informs us, and this information is sanctioned

by the Prefect of the department, that " all the learned societies, medical bodies, and constituted authorities of the republic, have imposed on themselves the duty of rendering the practice universal, by inoculating the people gratis;" and that " all those who inoculate the Cow-pock, have submitted it to experiments, which prove more and more the innocency and efficacy of that process."

He informs us, that " the constant and decided success of the practice, the joint assent of the most enlightened and impartial medical men of England and France, and the coincidence of the experiments made in London and in Paris, in the South of France, and in the frontiers of the North, all concur in confirming the confidence with which this discovery has inspired the public."

At Brussels, many of the professors, and other eminent medical men, have testified their respect for the new practice, by inoculating their own children with the Cow-pock; and the event has justified their determination.

Our author, having been one of the first possessors of vaccine virus in that city, has inoculated above two hundred persons of every age and sex; and the success he met with, in those cases, has dispelled every doubt on this important subject. He affirms, that inoculation of the small-pox, which was hereto-

fore a wise and commendable precaution, ought now to be considered as a serious disorder.

In two cases M. Fournier observed inflammation run rather high. In one, the patient had been inoculated in both arms, by six punctures, all of which succeeded. The other subject, an infant, was only inoculated by one puncture in each arm; but it is probable, that friction of the pustules may have exasperated the disease.

It is a little remarkable M. Fournier should conclude, that in another of his patients, the fever was not occasioned by the inflammation of the tumour; though it was considerable, though on the ninth day it was become phlegmonous, and was of a shining red, an inch and half in extent; and though it was surrounded, on the tenth day, with the brightest areola that he had ever seen.

It is also rather singular, that the author should have pitched upon this identical arm, covered with a constellation of four pustules, and with uncommon, as well as unnecessary inflammation, as a specimen of an affection, which, he says, is not worthy of the name of a disease. Instead of a benign aspect, which the Cow-pock bears, when properly cultivated, it looks like a blazing comet; and strikes every beholder with terror.

M. Fournier is mistaken in supposing, that the

country people in Gloucestershire, and Devonshire, have long been in the habit of inoculating themselves for the Cow-pox. They have, indeed, long been in the habit of exposing themselves to casual infection; and many of them have been preserved from the small-pox, by virtue of the vaccine disease. M. Fournier says, the experience of the inhabitants of those counties has led to the discovery, which has immortalised Dr. Jenner.

The learned author tells us, his researches have induced him to conclude for a certainty, that the Cow-pox exists among the cows in Belgium. M. Uytterhœven, an eminent surgeon at Brussels, who possesses a profound knowledge of many branches of natural philosophy, and natural history, entertains the same opinion. The peasants of Campine, a dairy country, assure M. Fournier that the Cow-pox attacks the cows in those parts; and the persons who habitually milk them, are exempt from the small-pox. He says, he has formerly seen a disease among cattle, in the South of France, which, he has no doubt, was the genuine Cow-pox.

The testimony of our author corresponds with that of all others, who have had an opportunity of witnessing the practice in an extensive degree. During the whole time of vaccine inoculation, the small-pox has prevailed there; and has latterly assumed a most malignant form; yet, although it has raged in every

quarter, those who were inoculated with vaccine virus, were preserved from its contagion.

In one house, two persons laboured under the small-pox, and six remained uninfected. Of these M. Fournier inoculated one for the Cow-pox. Within eleven days, his five companions were seized with the small-pox; and although he was constantly with the whole seven, and frequently in contact with them, yet he resisted infection.

Our author confirms the opinion already so often advanced, that matter taken after the ninth day frequently fails to produce the vaccine pustule. He speaks of eruptions, which, if they were in reality the effect of the Cow-pock, are a very rare occurrence: they were of a vesicular nature; and I cannot but suspect, that they were the chicken-pox.

M. Fournier inoculated many of his vaccine patients, above a month after their recovery, with variolous matter; and on all occasions exposed them to the contagion of the small-pox. He informs us, that these experiments all succeeded with him, as they had done with others. None of his patients proved susceptible of that tremendous disease.

The learned author met with another opportunity of verifying the antivariolous virtue of the vaccine disease. One child in a family being attacked with the small-pox, he inoculated three others with the

Cow-pock, when the pustules of the variolous patient had been two days in a state of suppuration. The experiment, nevertheless, was attended with complete success. On the ninth day, when the vaccine pustule was well characterised, he inoculated the eldest of them with variolous matter; which, on the third day, produced an ephemeral pustule; if such it could be called, when it lasted not two days; These children lived night and day in the apartment where the patient labouring under the small-pox was; and were sometimes even in contact with him; but without sustaining the least injury from this exposure.

"It would be tedious," says M. Fournier, "to enlarge on this point.—My experience has convinced me of the efficacy of vaccine inoculation; and I have no doubt, but in a short time, all its opponents, who have the least honesty in them, will abjure their error."

He concludes his work with a description of the process of inoculation, and that of the disease, "if it deserve that epithet." It will, however, still less deserve that epithet, if the learned author will in future inculcate the practice, of making but one puncture in each arm.

He thinks the term imperfect, more proper than that of spurious pustule. It is, however, probable,

each of those terms may be proper, on different occasions.

He agrees with inoculators in general, that vaccine virus undergoes no change, in consequence of its continual transplantation from one subject to another. He has transmitted it from one arm to another, for thirty generations; and thinks it a proof, the matter had suffered no degeneracy, that an infant inoculated with it in the thirtieth generation, had a considerable eruption.—This is proving too much.

Our author informs us, that in the neighbourhood of Brussels, some medical men had inoculated with spurious matter; and would have perpetuated their error, and entailed disgrace on vaccine inoculation, had not a more intelligent person informed them of their mistake.

M. Fournier proposes for a certain number of cows to be kept in every place, where vaccine inoculation is publicly performed; and that they should serve as reservoirs for matter. He thinks, such a measure might inspire the public with greater confidence in the practice. But, as it is unnecessary, they who adopt it, will shew too little regard to the feelings of the brute creation; and too much to the caprice and folly of mankind.

I most cordially coincide in opinion with M. Fournier, that it will be the care of every wise and en-

lightened government, to favour, by all the means in its power, the propagation of a discovery, whose object is to extirpate the small-pox; and to increase population.

The last article in this Essay, is a case of spurious Cow-pox, copied from a report of the central committee at Paris. The matter with which the patient was inoculated, was turbid, opaque, and puriform. An areola surrounded the puncture on the third day; and daily increased. The vesicle burst on the sixth; and discharged a fluid, which, when in a state of exsiccation, formed a yellowish crust, semitransparent, and of the colour of gum. This crust fell off on the eleventh day; and was replaced by another of the same character. Under this was formed a purulent matter, which oozed from the surface; and terminated in a scab, that fell off on the twenty-first day.

The report proceeds to state, that in the opinion of the committee, it is their duty, as well as the duty of the goverment, and of all well-informed men, to call the attention of practitioners, and of the public in general, to an object of so much importance. "It is to prevent every mistake of this kind, that the committee have solicited the establishment of a central hospital; where the officers of health may come, and learn by occular demonstration the characters of the genuine Cow-pock. For the sake of those, whose distance may deprive them of that source of

information, the committee have resolved again to publish this instruction.

I have already declared my suspicion, that the vesicular disease which was mistaken for the small-pox in Paris was the chicken-pox. This is confirmed by the testimony to the Central Committee; who tell us, that medical practitioners, as well as others, often confound these eruptions; as, we know too well, practitioners and others, on this side of the water, have frequently done.

The committee remark, that inoculation of the small-pox itself has sometimes given rise to fallacious appearances. Among a number of instances of this kind which they could quote, they only mention one, which occurred to the celebrated Tissot; who, having inoculated a child whom he dearly loved, and being satisfied with the signs of infection that shewed themselves, opposed a second inoculation, and had the misfortune, some time after, to lose him by the small-pox. This event, it is well known, embittered the last years of his life; and we are assured that he never ceased, every day, and in every season, in the sight of all the inhabitants of Lausanne, to carry a flower to this infant's grave.

M. Fournier has seen a case, which confirms what I have already recorded, that a genuine vaccine pustule sometimes occurs without an areola; and renders the patient insusceptible of the small-pox.

He informs us, that at the time of his writing, there were two cases of vaccine eruption over the whole body at Brussels. He does not affirm that he has seen them. We may therefore be permitted to doubt, whether they were cases of chicken-pox or small-pox; or whether the learned author did not take them from the Brussels' Gazette. We may also be permitted to doubt, whether they did not spring from contaminated matter; too much of which found its way to the Continent. Certain it is, that while we read of three cases of the kind at Brussels, happening within the few first months after the practice was introduced, and when a small number of persons have been inoculated there, a hundred thousand persons are inoculated in Great Britain, without any such occurrence. General eruptions are now confined to the inoculation of the small-pox.

The following fact was certified to M. Fournier by citizen Lebroussart, professor of ancient languages in the Central School. "One of his children, four years of age, was a long time affected with deafness, which grew worse and worse. Two months ago he was inoculated with the Cow-pock. On the ninth or tenth day, when the arm inflamed, the deafness began to diminish, and on the twenty-first, it entirely ceased."

To this remarkable instance of the salutary effect of vaccine inoculation, I shall subjoin two others; which were communicated to me by Mr. Garsed,

surgeon, of Blagan in Glamorganshire, South Wales. In the beginning of the year 1801, I sent him some vaccine matter at his request; the small-pox then raging in that neighbourhood. With this matter he inoculated his own child and others; of whom, an infant four months old, had been troubled about three months with a violent cough, which did not yield to medicine. This cough left her suddenly, on the fifth day after she was inoculated with the Cow pock; and has never returned since. She now enjoys a good state of health.

Having reason to doubt, whether Mr. Garsed's matter might not become contaminated, from his inoculating some persons who might have received previous infection of the small-pox, I sent him a fresh supply. "This," says he, "was immediately put in action. In a few days Messrs. Jones and Powell, of Neath, informed me, that a boy sixteen months old, full of scrofulous tumours, was brought to them for assistance; and that it was their opinion, he could not live more than twelve months. His mother also laboured under this disease; and had lost one child by it, who died in a most miserable manner.

"As the child had not had the small-pox, I advised that he should be inoculated for the Cow-pock; and as the gentleman under whose care he was, coincided in opinion with me, his mother consented. On the 23d of March he was inoculated; and the Cow-

pock went through its various stages in as favourable a way as could be wished.

"At that time he had several abscesses, particularly about the arms, neck, and shoulders. They soon began to heal, are now all healed, and the child enjoys perfect health; which is attributed entirely to the Cow-pock. The mother died in May last, from the vast discharges of different abscesses, all of a scrofulous nature."

In compliance with my request, Mr. Garsed enquired, whether the Cow-pox was known in Wales. The answer he sent me was, it is not known in that country; and he thinks it not likely it should; as the land is not so rich as in England. He observes also, that the best farms are kept for rearing oxen; and that the dairy is considered but as a secondary object, except in hill-farms; such as we should think more proper for sheep. To this want of fertility in the ground, and luxuriance in the grass, Mr. Garsed ascribes the want of the Cow-pox in Wales.

His answer to another question which I had proposed, will, however, afford a better solution of this problem. He informs me, that "the men never milk in that country." The season when the genuine Cow-pox prevails, a cold and wet spring, coincides with the popular idea, which Dr. Jenner has adopted, that it originates from the grease; not with an idea, that it originates from luxuriant herbage.

This, indeed, is supposed to be one cause of the spurious disease.

We are now favoured with "Observations on the Cow-pock," by Dr. Lettsom. This work is embellished with likenesses of the celebrated author of the happy discovery; and with those of Drs. Woodville, Pearson, and Waterhouse. It is also embellished with every grace that language can bestow: and it is only justice to say, that of all the authors who have written on the subject of vaccine inoculation, no one has more truly appreciated its value, or more fully displayed its excellence, than Dr. Lettsom.

"An animal," says he, "whose lactarious fountains afford in our infancy a substitute for those of the parent, and from which we draw, through life, a considerable portion of our nutriment, is destined by the sagacity of one enlightened philosopher, to protect the human species, from the most loathsome and noxious disease, to which it is subjected.

"In reflecting upon its ravages, the mind revolts with horror; not merely from its fatal devastation, but likewise from the deformity it inflicts upon its victims; by rendering the fairest sublunary being, the godlike countenance impressed by the Creator, an object of compassion, if not of disgust.

"I contemplate, therefore, with medical pride,

and not less with national gratitude, the name and discovery of Dr. Edward Jenner; who, by conveying from a small pustule, on the teats or nipples of the udder of the domestic cow, a particle of matter, under the cuticle of the human subject, has establised the divine art, of preventing the ravages, and even the appearance of that scourge of his existence, the small-pox.

"From time immemorial, this domestic animal has been consecrated among ancient nations, as an object of worship. To all it is now an object of grateful admiration. What, then, is due to that philosopher, who has drawn new, and heretofore unexplored sources of happiness, from this salutiferous animal? —Gratitude calls upon the nation, for a national reward; and great indeed would it be, were it adequate to the national good, that must result from this wonderful discovery; which embraces at once the following axioms. 1st. It prevents the accession of the most fatal malady under heaven,—the variolous infection. 2dly. It is not infectious. 3dly. It is believed, that it never has been fatal, and never will be. 4thly. It creates no blemish on the human frame. 5thly. It conveys no constitutional disease.

"From the experience I have had, I cannot bring my imagination to conceive, that any healthy subject can die of a process, which can hardly be called a disease; or, in other words, that a single pustule can prove fatal.

" Prejudice and ignorance have given rise to various reports; which enquiry has proved to be unfounded. It must, however, be acknowledged, that many mistakes have been committed by practitioners. Matter has been taken from the chicken-pox, and too frequently from the purulent fluid round the scab of the Cow-pock, or in the variolous pustule; and, in either case, it is needless to say, inoculation under such circumstances, is no security against the small-pox.

" It is not in vaccine inoculation alone, that mistakes have been committed; even by practitioners of established character. I lately attended two young persons under the small-pox, each an only child, of considerable family; who had been inoculated two or three years before by respectable men; and the mothers of the children shewed me, what they conceived to be the marks, or pitting, from the inoculated small-pox.

" Happily, they both recovered from an alarming eruption of the disease: but two relations I once claimed, who were inoculated with matter supposed to be variolous, by an eminent inoculator, afterwards caught the small-pox; and to one of them it proved fatal. These instances of error, so injurious to the medical character, and distressing to the community, should excite the most guarded circumspection in the professors of the healing art.

" Condamine, in describing the superior safety of variolous inoculation, compared with the natural infection, represents the latter as a rapid river, which every individual is liable to pass over; and the former as a boat, which each may avail himself of, to ensure a safe passage: while those who do not embrace this conveyance, must incur the risk of plunging into the dangerous current."—Dr. Lettsom is of opinion, that if we consider variolous inoculation as a boat, likely to facilitate our passage, and waft us over the stream, we ought to consider Vaccine Inoculation as an adamantine bridge.

He remarks, that the highest honours have been conferred on heroes, both ancient and modern, for the desolation of provinces, the massacre of their fellow-creatures, and the destruction of man; that Saul has slain his thousands and David his ten thousands; but the altar of Jenner is not polluted with blood!—" His claim is that of having multiplied the human race; and happily invoked the goddess of health, to arrest the arm, that scatters pestilence and death over the creation!"

Such is the strain, in which Dr. Lettsom has written an eulogium on the greatest benefactor of mankind.—We now come to the professional part of his work; in which his opinions in general, agree with those of other authors who have treated on the subject. In one respect, however, a trifling variation may be discovered. He describes the vaccine pustule, and

its areola, as farther advanced by the sixth day, than they are either described by other authors to be, or seen in nature. This is the more necessary to be pointed out, because the slow progress of the pustule is an essential characteristic of the genuine disease.

Dr. Lettsom has proposed, as other authors have done, that seamen should be inoculated on long voyages, for the sake of transmitting fresh matter to foreign parts; and observes, that those who have had the small-pox, would suffer little or no inconvenience. It has already been remarked, that those who have had the small-pox are in general insusceptible of the Cow-pock; that when a pustule is excited in such persons, it is commonly of the spurious kind; and that matter taken from such a pustule, engenders one of a similar species. Many instances, however, of the contrary have occurred. One, in which a pustule, perfect in all respects, except size and duration, took place about a month since, in the wrist of a young man who lives with me; and inoculated himself without my knowledge.

In this case, no sign of infection appeared till the third day. On the sixth or seventh the pustule arrived at its height; and was then about half or two thirds of its usual magnitude. It was elevated at the margin, and depressed at the centre; and the fluid which it contained was perfectly limpid. After desiccation, it was converted into a dark-coloured scab, adhering firmly to the skin.

Dr. Lettsom expresses a hope, that vaccine virus, which has now borne the ordeal of successive transmissions through the human subject, since the beginning of the year 1799, will not be deteriorated, nor lose its pristine virtue, till that dreadful scourge the small-pox shall be annihilated.

"This," he adds, "might be effected in the present year, should a due sense of self-preservation influence the community in general. Should the people of these kingdoms be thus actuated, about 36,000 inhabitants would be added to its population in the year 1802; and so progressively every subsequent year, till the next century; when the whole number, gained by the Jennerian discovery, would amount to about twelve millions of fellow-creatures."

If the vaccine fluid be introduced, not by incision, as too often has been, and too often is still practised, but by a small puncture, as I long ago proposed, and as Dr. Lettsom approves, the formidable inflammation of the arm, to which he alludes, will be prevented; and the cool regimen, and aperient medicines, of which he speaks, may be dispensed with.

The following extract of a letter from Dr. Jenner to Dr. Lettsom, is too interesting to be omitted here. —"If inoculators would be attentive to this, which I lay down as a golden rule in vaccine inoculation, *never to use the virus after the formation of the efflo-*

rescence around the pustule, they never, or scarcely ever, would experience disappointment.

" I never, in any one instance, saw a pustule formed by the virus, taken in this early state, and transferred to the skin of a person fully susceptible of its action, that was not properly characterised; or, in other words, that was spurious.

" How easy, then, is the science of vaccine inoculation! It consists only in the knowledge of the true Cow-pock; the period of taking the virus; and the treatment of the arm, if it should ever be necessary to check redundant inflammation."

In another letter to Dr. Lettsom, Dr. Jenner expresses himself in the following manner.—" The small-pox rages at this time in the metropolis, with desolating fury.—We have in our power, the means of stopping the calamity.—Why not employ them?

" We perceive, as it were, our houses on fire; and, *with buckets in our hands*, stand idly gazing on the flames.

" We bar the door against foreign plagues, by our laws of quarantine; while the greatest domestic plague that ever infested us, is suffered to advance without control.—Would it not be wise in the legislature, to interfere in the cause of suffering humanity?"

After giving an account of the labours of Dr. Woodville and Dr. Pearson, and of the progress of vaccine inoculation in this kingdom, Dr. Lettsom reports what progress it has made, under the auspices of Dr. Waterhouse, in America.

He observes, that on the American continent, inoculation of the small-pox has not been much encouraged; and cites a passage from the Travels of the Duke of Rouchefaucault Liancourt, stating, that in Virginia a law exists, which interdicts inoculation for the small-pox, unless permission be first obtained from the justices, and from all the neighbours within the distance of two miles. Any man who dares to inoculate, without observing these precautions, is liable to a fine of ten thousand dollars. Hence it appears, that there is almost as much ceremony in America, before they inoculate a person for the small-pox, as there is in England, before they dig a canal.

This apparently severe restriction, was the result of mature deliberation and sound policy. It was part of a system calculated to prevent the propagation, and, if possible, extinguish the seeds of that terrible distemper.—It was coupled with another prudent regulation, by which it is provided, that any person who is accidentally attacked with the small-pox, shall be carried to a lonely house in the middle of the woods; and there receive medical assistance. If the village, town, or district to which he belongs, catch the infection, these places are cut off from all

communication with the rest of the country; and are permitted to have recourse to inoculation: otherwise, it is never allowed.—Such wholesome laws, and patriotic regulations, may furnish useful hints to other legislatures; if they should ever deem it necessary to check the inroads of the small-pox, and give time to vaccine inoculation to exterminate that disease.

Having summed up the evidence in favour of the new practice, Dr. Lettsom asks, whether variolous inoculation is now justifiable? which he determines in the negative.—He thinks, and with great reason, that after making a due allowance for old habits, and shewing a proper indulgence for deep-rooted prejudice, no conscientious practitioner can ever sanction or encourage inoculation for the small-pox, or sacrifice a single victim to that process; when we are in possession of so safe and effectual a substitute as the Cow-pock.

Dr. Lettsom observes, that if parents were previously informed of the danger of variolous inoculation, and were the vaccine inoculation incapable of communicating infection to others, some apology for assenting to the practice might be admitted; but when we reflect, how much inoculation for the small-pox endangers the lives of others, by spreading the natural infection, we cannot but consider any professional man unjustifiable in supporting the practice.

As a confirmation of this opinion, and a striking instance of the ill effects of partial inoculation, our author quotes the following passage from Willan's Reports of the Diseases in London for 1798.—" A child was inoculated in April, whose parents kept a shop in a court, consisting of about twenty houses. As the inhabitants every day repaired, for necessary articles, to the source of infection, the consequence was, that seventeen persons were infected with the small-pox in the natural way, within a fortnight after the child's recovery; and eight of them died of the disease."

Dr. Lettsom exclaims, " What a dreadful mortality of our fellow creatures is here exhibited!" and asks, whether any medical practitioner, who should inoculate for the small-pox, when the utility of vaccine inoculation is so well understood, would not be responsible for the fatal catastrophe?"

He maintains, that, knowing the indubitable safety of the vaccine pock, it is the duty of every medical man, to place before those parents who solicit variolous inoculation, the certainty of life on one hand, and the danger of death on the other; and if they refuse to accept the former, he ought not to be accessary to the latter, by acting as the medium of diffusing the fatal poison; unless under very particular circumstances.

I have already inserted a copy of the letter from

the President of the United States of America to Dr. Waterhouse. Dr. Lettsom has published that which was addressed to Dr. Waterhouse by Mr. Adams, the former President, three months before, on the same subject; which is as follows.

"DEAR SIR,

"I HAVE received, and will communicate to the American Academy of Arts and Sciences, your *Prospect of exterminating the Small-pox.*

"I have read your history of the Kine-pock with great pleasure. Your zeal and industry, in giving these experiments fair play in America, deserve the thanks of all the friends of science and humanity.

"To disarm the small-pox of its contagion, is an enterprise truly worthy of an HERCULES in medicine.

"With great regard, I am,

"Dear Sir,

"Your obliged friend, and
humble servant,

"JOHN ADAMS."

Such were the terms in which this great man hailed the dawn of vaccine inoculation in America. How must he have mourned, when he saw this bright lu-

minary set in the western hemisphere! How must he have rejoiced, when he saw it rise again with new glory!

Honoured with such patrons, the new inoculation must prosper in the new world. Wholesome laws will be enacted; inoculation of the small-pox will be prohibited; and the propagation of the new practice encouraged, by every political regulation compatible with the liberties of the people.

In the Medical Journal for September, 1801, is a communication from Mr. Dennett; who speaks of an infallible method of ensuring infection with vaccine matter kept several months, yet gives us an account of his having failed twice out of three times, with matter kept only as many days.

The first inoculation, which was in one arm only, totally failed. The second succeeded in the right arm; but failed in the left. Possibly the matter might not have been preserved in his usual way; but of this we are not informed. The subject of this inoculation having been exposed to the infection of the small-pox several days previous to the successful insertion of vaccine matter, a variolous pustule appeared in the centre of the incisions, on the thirteenth day from the first exposure to a variolous atmosphere; and the eighth from vaccine inoculation.

This is another instance of the coexistence of the

Cow-pock and small-pock. From the concurrence of these two diseases, the febrile symptoms were much more severe, than in any other patient whom Mr. Dennett had before inoculated with vaccine virus.

This occurred in November, 1800; and with the two distinct kinds of matter taken from the two distinct kinds of pustules, Mr. Dennett has continued both sorts of inoculation to the present period. That from the right arm produces the genuine Cow-pock; and that from the left the small-pox.

I agree with Mr. Dennett, that it is probable the child received infection from his brother, during the eruptive fever. This was thought possible to take place, by the late Dr. Monro and others. From this case and many others, Mr. Dennett justly observes, we may deduce an argument, to shew the impropriety of exposing any one to variolous contagion, at the time of inoculation for the Cow-pock; and the necessity of great circumspection in the practitioner, to prevent mistakes and confusion in taking matter for future inoculation. Another argument also is deducible, which is, that vaccine inoculation has, in some measure, but, like variolous inoculation, in a degree not hitherto well ascertained, a power of superseding the small-pox.

Mr. Dennett recommends three or four incisions in vaccine inoculation. They who were accustomed

to make one, have in general seen reason to abandon the practice.

Mr. Dennett's humanity and good sense, I have no doubt, will induce him to abandon variolous inoculation; and to consider it, in our present improved state of knowledge, as little less than criminal.—To me, I must confess, any practitioner, who acts in that amphibious way, seems to bear life in one hand, and death in the other; and to have a label on his breast with this motto, *In utrumque paratus.*

Mr. Garsed, of Blagan, expresses an apprehension, that inoculation for the Cow-pock will make but a slow progress in Wales; on account of the difficulty of procuring vaccine matter, and the facility with which variolous infection is communicated. This difficulty, however, will diminish, in proportion as the public become reeonciled to the practice; and enable medical men to keep up a succession of patients.

I trust, a time will come, when a Vaccine Institution will be established in every town in the British dominions; and when every surgeon will inoculate those who think proper to accept of it, gratuitously for the Cow-pock. A royal proclamation, or an address from the clergy, whether delivered from the pulpit, or circulated in a printed form, could not fail to produce a deep impression on the public mind.

How far the interference of the legislature is necessary, the wisdom of the legislature must determine.

Mr. Cline was lately assured, by a gentleman who arrived from New York, that vaccine inoculation is making a rapid progress there, and over the whole continent of America. By the same respectable authority I am informed, that vaccine matter, taken from a patient whom I sent to that place, has succeeded in eradicating the small-pox from St. Thomas's hospital. A day or two after its first appearance, the Cow-pock was introduced. Seven or eight persons in all were inoculated with it; and the flame of the small-pox was extinguished, for want of fresh fuel.

On a former occasion, when the small-pox broke out in the same house, one child was preserved by the vaccine preventive; another, whose mother refused to submit it to that salutary operation, sunk under the disease.

Mr. Bird, of Sturminster, informs me, that the first of his children who was inoculated with Cow-pock matter sent by me, has since been repeatedly inoculated with variolous matter by the late Mr. Harrison; but to no purpose. A boy who lived with Mr. Harrison, having had the casual Cow-pock, was also several times inoculated by his master; but in vain.

Mr. Bird himself, unwilling that the Cow-pock matter should be lost, inoculated two of his own servants. These have since resisted variolous infection; though three times inoculated, and several times exposed to it in the natural way.

My own practice has furnished a new chain of evidence in favour of vaccine inoculation, since my last report. One child of Mr. Hart, in Marshall-street, Carnaby-market, has been exposed to the small-pox in the house where he constantly resides, a second time, and three other children of the same parents have been exposed to it a third time, in consequence of the natural small-pox occurring so often under the same roof. These cases, if the number of exposures be multiplied by the number of patients, who inspired the variolated atmosphere during the whole course of the disease, may be considered as eleven fresh proofs, in one family, in favour of the new practice.

Aug. 1, 1801, Mr. Durant, my assistant, inoculated three children of Mr. Griggs, at No. 14, Tottenham-place; the small-pox having appeared in the same house two days before. The vaccine infection succeeded in two of the children; the other was inoculated with success, five days after. They all escaped the contagion of the small-pox.

Aug. 15, Mr. Durant inoculated Mrs. Gibbons, at No. 4, Long-lane, Southwark, for the Cow-pock.

The small-pox had appeared in her child some days before, and proved fatal. The mother resisted vaccine inoculation, and variolous infection so far, as to convince me that she had had the small-pox before. She had, indeed, several pustules, attended with slight constitutional symptoms; but the latter were transient, and the first were confined to those parts, which had been in contact with the child who fell a victim to the disease.

Mrs. Scott, of No. 2, Smirk's-buildings, used to go almost every day to assist Mrs. Gibbons, and to carry with her a child of her own, whom Mr. Durant had inoculated eight days before; and who had then the vaccine pustule on its arm. This infant also, breathed the variolous atmosphere with impunity.

A child of Mrs. Cooper, who rents the house, was inoculated with the Cow-pock at the same time with Mrs. Gibbons, and received infection. It was exposed, not only to the danger of catching the small-pox in the case above mentioned; but also to that of catching it from its own brother, who was supposed to have undergone the disease before; but received it now. With him the vaccine patient slept during the whole course of his disorder; but no ill consequence ensued.

Mrs. Berryman, of Philips's-gardens, Tottenham-place, carried a nurse-child, who had been inoculated by Mr. Durant, to a house where a person laboured

under the small-pox; and held it immediately over him for a considerable time; but to no purpose.

A child of Mrs. Phipps, at No. 11, Orange-court, Swallow-street, whom I had inoculated with the Cow-pock, happening, since that time, to be in a house where three children covered with the small-pox lay in one bed, was put into bed between two of them. He then threw his arms round one of the other children; and was suffered to sleep in that situation, three quarters of an hour; yet he received no infection.

A child of Mr. Wheeler, in Denmark-court, Exeter-change, whom I had inoculated a year before with the Cow-pock, was carried many times to a house where the small-pox was, and every effort was employed to infect him, but in vain.

Mrs. Shepherd, of No. 14, North-street, Knightsbridge, lately brought a child to me to be inoculated for the Cow-pock; and informed me, that another of her children, whom I had inoculated in the same manner a year before, had been often exposed to variolous contagion without the least disadvantage; and this had induced her to have recourse again to the new practice. Her first child had the chicken-pox during vaccine inoculation. It first appeared two days after the insertion of vaccine matter; and fresh pustules appeared in succession, during the formation of the Cow-pock pustule; totally refuting the

fallacious theory, that two morbid actions, at the same time, are incompatible.

A child of Mrs. Warburton, at No. 24, Swallow-street, whom I had inoculated with the Cow-pock, has since been exposed to the contagious exhalations of the confluent small-pox, which raged in the same house.

Mrs. Shepherd informed me, that Mr. Willcock, of Exeter-street, near Sloane-street, where she had resided when her first child was inoculated, had submitted one of his children to vaccine inoculation; but his confidence in that preservative being shaken, by the false reports that have been circulated with so much industry, by certain practitioners, who wish to avail themselves of the prejudices of the public,—he had another child inoculated with variolous matter. The event proved that his fear was groundless; for the child who had been inoculated with vaccine virus, slept with the other who was under inoculation of the small-pox, during the whole course of the disease, without betraying the least sign of infection.

Two children of Mr. Surrage, at No. 25, Tottenham-place, were inoculated with Cow-pock matter by Mr. Durant, and one by me. Several months afterwards, they were all repeatedly exposed to variolous infection; but, armed with the virtue of the vaccine preventive, they bade defiance to that distemper.

A child of Mr. Myers, of Cock-court, Jewry-street, whom I had inoculated with the Cow-pock, was several times carried by its mother to a house where the small-pox was, and suffered to play, and to lie in the same bed, with another child labouring under that disease. The small-pox was so severe, that it proved fatal; nevertheless, the child who had undergone vaccine inoculation escaped unhurt.

Exclusive of these convincing proofs of the prophylactic power of the vaccine virus, which have lately occurred in my own practice, others are continually related to me by respectable authority. Mr. Hurd, of Furnival's-inn, informs me, that about fifteen years ago, when there was a general inoculation for the small-pox at Wincanton, in Somersetshire, Mr. Perfect, a surgeon of that town, inoculated a young woman twice for that disorder; but to no purpose. The cause to which she attributed the failure of variolous infection was, her having had the Cow-pox.

Mr. Nash, of Richmond-buildings, Dean-street, Soho, remembers a circumstance which occurred forty-five years ago, proving that the opinion of the antivariolous property of the vaccine disease then prevailed. A farmer who lived in Wiltshire, when he was going to London, being asked, whether he was not afraid of the small-pox, replied, No, he had had the Cow-pox.

A young man, related to Mr. Nash, who had received the Cow-pox some years before in the casual way, was twice inoculated for the small-pox at the Small-pox Hospital, about a year ago; and not proving susceptible of contagion in that way, was exposed to the effluvia of the natural disease, in the midst of that concentrated infection; but exposed in vain.

The arrival of some foreign publications, imposes on me the duty of giving an analysis of their contents.

The Journal Physique falls into the common error of French authors, that of ascribing to an eminent physician in London, the editor of different periodical publications well known on the Continent, certain inconclusive experiments performed by a surgeon at Manchester.

The Recueil Périodique for June and July, 1801, contains, as usual, a rich harvest of intelligence on this subject.—The editors first notice a paltry pamphlet, written by a Dr. Verdier against the new practice. They declare, that the slanderers of that practice, among whom they reckon the author of the little tract before mentioned, pursue a course contrary to the progress of improvement, and the light of reason; that, instead of well-ascertained facts, and fair deductions, their writings contain nothing but assertions destitute of foundation, pretended fears, and absurd prejudices; the design of which is, to

excite vain alarms, and to prevent the public from adopting a practice, which it is so much their interest to adopt.

After clearing away this rubbish, the editors of this respectable publication again prove, by the most unexceptionable evidence, the value of Dr. Jenner's discoveries; and erect another eternal monument to his fame.

First they give a concise account of a memoir on vaccine inoculation, presented to the Prefect, and the Society of Agriculture, of the deparment of Seine and Oise, by M. Voisin, surgeon of the Civil Hospital at Versailles.—This work, they affirm, is a collection of practical facts; every one of which bears the stamp of truth.

From the whole of his practice in vaccine inoculation, the learned and ingenious author deduces the following, among other corollaries. 1. That the preservative virtue of the vaccine virus is confirmed, by the example of those who have been inoculated with it, and afterwards lived in the midst of variolous contagion without being infected thereby; and also by the counter-proofs tried on the patients inoculated in the Civil Hospital. 2. That one vaccine pustule is a sufficient security against the small-pox. 3. That vaccine virus loses nothing of its energy by transmission. 4. That it preserves its proper character, in the midst of other diseases; and, like the variolous

matter, forms no combination with any other species of infection.

The same periodical work contains the first report of the Committee of Vaccine Inoculation at the Louvre; addressed to the Society of Medicine at Paris, by whom they were appointed.

After expressing a due sense of the importance of their undertaking, they declare, that from their first establishment, they have incessantly been employed with all the zeal which the society had a right to expect, and which the great and wonderful discovery which offered itself to their examination, must necessarily inspire. They have enriched their report, not only with the fruit of their own researches, but also with the result of the practice of their numerous correspondents; and of many other medical men, who have written to them on this subject.

They declare, that vaccine inoculation daily gains new proselytes; and that its fate appears to be irrevocably fixed. Besides other countries before enumerated, we are informed by the committee, that it is now practised in Portugal, and in Denmark. They declare, that the uniform language of all medical men who devote themselves to the new inoculation, the rapidity of its progress, the feebleness of the arguments, and the falsehood of the allegations urged against it, all concur to allay the fears, and to con-

firm the hopes, which the friends of humanity have entertained on this occasion.

They inform the society, that from their first institution, they had been busily employed in announcing to the public, by means of the journals, the nature of their commission; and the public benefit with which it was fraught. To the poor they offered a participation in the advantages of the practice, free of expense. To all the medical men of France, and of other countries, they offered to transmit vaccine matter, with instructions for its use. For this purpose, their secretary was directed to draw up a summary of those principles respecting this kind of inoculation, which are avowed by practitioners in general; and sanctioned by general experience.

The committee have received from all parts of France, the most satisfactory accounts of the success of vaccine inoculation; thousands, who have undergone that process, constantly live in the midst of an epidemic small-pox, now reigning, yet catch no infection from that distemper.

The committee remark, that the multitude of proofs which have been communicated to them by their correspondents, are powerful arguments in favour of vaccine inoculation. But, they add, if we consider, that their number is no more than a trifling fraction, when compared to those received from London, Vienna, Geneva, Paris, and almost all the

principal cities of Europe; if we also consider, that the same experiments, made by the most enlightened medical men of all countries, have been attended with the same success,—it is difficult to conceive, that the most prejudiced man, if he be an honest man, will resist the general impulse, and not be convinced.

The committee observe, that the adversaries of vaccine inoculation, seeing the mass of evidence with which it is fortified, deem it imprudent to attack it in front. Despairing of success in that kind of conflict, they oppose to a vast number of incontestible facts, only certain pretended occurrences, in the invention of which they have commonly the whole merit. This is consonant to the practice of their allies on this side of the water; who now desist from open warfare; retire to their lurking-holes, and seek a refuge in their obscurity. Nevertheless, they now and then make short sallies; and discharge whatever venom their disappointed malice can collect, by the common sewer of some venal and prostitute print.

We are informed by the committee, that the anti-vaccinists betrayed either a want of sincerity, or the most unpardonable ignorance, in calling a small vesicular eruption, which has prevailed epidemically in Paris, as well as in London, the small-pox; those who had previously had the small-pox, whether distinct or confluent, having been attacked by it indiscriminately with others.

The committee relate several instances, where persons who were pre-infected with the small-pox, had a concurrence of that disorder together with the Cow-pox; but they add their testimony to that of many other respectable practitioners, that in such cases the small-pox is in general extremely benign.

The committee caution us against exposing our patients to the infection of the small-pox, before that of the vaccine inoculation has manifested itself; which they have known to be as late as the twenty-first day. Till the vaccine matter commences its action, there is no doubt but a patient may catch the small-pox.

They produce different cases, to prove, that matter taken from vaccine patients labouring under other cutaneous diseases, sush as the itch, and the small-pox, has not communicated any disease but the Cow-pox. They conclude, that the apprehensions of the public, relative to the inoculating of other diseases together with the Cow-pox, are destitute of foundation; but, at the same time, they allow, that it is more prudent, only to take matter from persons in health.

Lastly, the committee recapitulate the substance of their report, in the following manner. "Vaccine inoculation appears to have fully answered the hopes it excited. It has not only triumphed over those who waged war against it; but, what was more diffi-

cult, and is more conclusive, it has resisted the various and innumerable proofs to which it has been submitted, with the strictest impartiality, by its own friends.

" It has remained pure and irreproachable, in the midst of a number of epidemics, which have occurred at the same time, as if on purpose to confirm its prophylactic virtue; and we may say, that nature herself has showered down proofs, of the value of the benefit she has conferred.

" The experiments on the subject, which are now innumerable, are not those of a small number of empirics, or of certain enthusiastic medical men; but have been repeated, and reanalysed, by the most learned and intelligent practitioners of almost every nation in Europe. The mode of proceeding, the result, and the success, were every where the same.

" What is opposed to such an accumulation of the evidence of facts, and to the united authorities of such professional men?—Five or six pretended events, proved to be false or misrepresented; collected with avidity by five or six persons, who contradict each other; and who, to say no worse, are the dupes of credulity and imposition.

" We cannot dissemble the truth: an authority so equivocal, compared with all those, on which the confidence of the partisans of vaccination relies, fur-

nishes the latter with one powerful argument more in their favour.

"From all these considerations, from all these unexceptionable proofs, collected with diligence and care, sanctioned by respectable names, and reported with fidelity, it appears to us, that the most strong, and the most well-founded prepossessions, in favour of vaccine inoculation, must be the necessary result."

A Treatise on the Cow-pox was lately published at Gottingen, by Dr. Osiander, Professor of Medicine and Midwifery in that university.

The learned author expresses his wonder, that no Englishman has yet observed, whether there be any resemblance between the Cow-pox and the Cow-itch; which, he says, is a common disease of the teats of these animals, particularly in India.—In addition to Holstein and Mecklenburg, where the Cow-pox has been discovered, he tells us it has also been discovered in Saxe Meinungen; and, as he was told by a farmer, in Hanover also.

Dr. Osiander's practice tends to confirm the utility of vaccine inoculation. His mode of applying the virus to a surface excoriated by blister plaster, is not likely to be followed by any man, who sees the plate accompanying the work: but it is difficult to conceive, how the pustule, by whatever mode excited,

could undergo all the metamorphoses there represented. The countenance of the lovely Vaccina, as exhibited by Dr. Osiander, is so disfigured by a blister, that it will gain her but few admirers.

Count Salm, who will ever be ranked among the benefactors of the human race, on account of his singular exertions in this noble cause, having done me the honour to call on me, when he was in England, I asked him, whether he had ever known vaccine inoculation practised in this mode. He replied, that he had frequently known it practised in this mode; and that he had many times known violent inflammations, and anomalous pustules, thus produced.

He also informed me, that he had known dreadful consequences ensue, from the infliction of deep wounds, when patients who had undergone vaccine inoculation, were put to the test of inoculation with the matter of the small-pox.

This humane and patriotic nobleman likewise informed me, that six hundred persons had undergone vaccination in Moravia, where it was introduced by himself, with the greatest success; and that two hundred of them had since been submitted to the test of variolous infection, which they all resisted.

By a letter from Professor Waterhouse, dated at Cambridge in America, August 6th, 1801, I learn,

that a second supply of vaccine virus which I sent to him, together with such part of this treatise as was printed, arrived safe.

The virus was conveyed between square pieces of glass, inclosed in gold-beater's skin. This method of inclosing the glasses charged with Cow-pock matter, which was suggested to me by a person who knew the advantages of it in the profession of miniature painting, I have already mentioned. It is the most ready mode of excluding air, and securing the glasses from the probability of breaking, without using a cement that may require heat, and injure the matter.

Dr. Waterhouse made use of the virus as soon as he received it, which was the 70th day from the time when it was taken from the pustule in London. It proved successful. He sent another parcel, which he had received from me at the same time, to President Jefferson; "under whose auspices," he says, "the vaccine inoculation has commenced at the city of Washington; and will doubtless extend itself through the southern states, where it will prove an incalculable blessing."

He adds, "Accept my thanks for this attention. Although we have the virus pretty well secured among us, yet a supply once in a while, from a respectable source, is, and always will be, very desirable; for I cannot easily obliterate the idea I myself started, of the degeneration of the matter.

" Accept my particular thanks for your book. Its perusal has afforded me great satisfaction. By it I see the substance of all that has been published on this new inoculation. It was so much the book I wanted, that I have already made an index to the volume; as far at least as the 400th page. I was glad to see how my little tract appeared in the eyes of the judicious in London."

Dr. Waterhouse acknowledges he had been led into an error, concerning the cause of suppurating pustules in the Cow-pox, by some accounts which had been published in this kingdom. He informs me, that two deplorable instances have occurred in America, in consequence of inoculating with variolous matter instead of the vaccine.

One patient whom Dr. Waterhouse himself inoculated with vaccine matter, had a crop of suppurating pustules, in consequence of previous infection. His mother, who is a nurse at the Small-pox Hospital, in the vicinity of Boston, had imprudently visited him the day before he was inoculated for the Cow-pox.

Dr. Waterhouse adds, " The arguments thrown out in England against this noble discovery and its application, are retailed here with great industry: but a great majority believe, and will be saved. Our numerous clergy are warm advocates for the practice; so, in short, are all persons, who are dis-

tinguished for talents and learning, throughout New England.—Our innumerable newspapers have spread the leading facts among every order of men; for the lowest order read in this country. From that circumstance alone, I will venture to predict, that the Jennerian inoculation will pervade our happy country."

While men of enlightened understanding, in both hemispheres, are thus endeavouring to extend the bounds of science, improve the healing art, and ameliorate the condition of man; a Doctor Herz of Berlin, alarmed either for the honour, or for the *interest* of the medical profession, comes forth to encounter this tremendous innovation.

He expects, what to any man of less profound erudition than himself might appear unreasonable, that we should always know whether an experiment is harmless, *before it is tried.*

He says, "little can be gained by vaccine inoculation."—*Hinc illæ lacrymæ.*—This will account for the opposition, with which it has to contend.

He asserts, "that foreign matter may lurk in the habit many years; and break out at last.—Hence, if at any time, a plentiful crop of foul humours, low prejudices, and vulgar errors, break out in a learned philosopher, we are not to suppose they are the natural production of such a soil;—but that they were

instilled into his mind by his nurse, and imbibed with his milk.

This renowned author gives but little credit to our English physicians; and our English physicians give but little credit to him. Indeed, they are guilty of an unpardonable offence, in annihilating a disease, to which many a man is indebted for a princely fortune.

Dr. Herz is a Jew; and may not be inclined to place a confidence in any members of society, but his brethren.—Let him, however, while he continues to inoculate for the small-pox, and to scatter pestilence around, remember the warning given to his friend Shylock; let him take care *not to shed blood.*

Dr. Herz talks of *brutal inoculation.*—Does he mean that derived from the brute; or that which none but a brute will now practise?

Bacon says, "Man possesses something in common with a brute animal; a brute animal possesses something in common with a vegetable, and a vegetable possesses something in common with inanimate matter."—Smellie, in his Philosophy of Natural History, says, "The same substances pass successively into three kingdoms, and constitute, in their turn, a mineral, a plant, an insect, a reptile, a fish, a bird, a quadruped, a man."

" Thus from, apparently, the vilest and most contemptible species of matter, the richest productions derive their origin. The most beautiful flowers, the most exquisite fruits, and the most useful grain, all proceed from the bosom of corruption.

" The great source of man's superiority over brute animals must be derived from his mental faculties alone.—The dignity of man's rank depends not on the structure of his organs: it is from the powers of his intellect alone, that he is entitled to claim a superiority over the brute creation.—These powers enable him to form ideas; to abstract, to reason, to invent, and to reach all the heights of science and of art."

After this, let us hear no more, of the human species being degraded, by a participation of a few atoms of matter with the brute animal. Any one who can reason in such a manner, has but little to fear on his own account.

Dr. Herz has published his remarks in an epistolary form; and addressed them to Dr. Dohmeyer, physician to his Royal Highness the Duke of Sussex, now in Portugal.—If, in entering the lists on the present occasion, Dr. Herz meant to avail himself of the tide of prejudice, " which, taken in the flood, leads on to fortune,"—if he meant to convert an honourable profession into an abominable traffic, and to act the part of a Jew, he has probably succeeded in

his attempt;—but if he wished to convert Dr. Dohmeyer, he has completely failed.

Dr. Dohmeyer, so far from being convinced by the arguments of Dr. Herz, is one of the most zealous and able champions for vaccine inoculation; and has not only established it in Portugal, but has also written on the subject in a style of the most persuasive eloquence, in order to promote the practice.

The rules which Dr. Dohmeyer has laid down for ascertaining whether inoculation has succeeded, are in general very judicious. In one respect, however, he differs from the most experienced inoculators; almost all of whom now acknowledge, that in many instances where vaccine inoculation is effectual, no symptomatic fever, or other constitutional affection, can be perceived.

When Dr. Dohmeyer published his treatise, he had inoculated sixty-two persons at Lisbon, with the greatest success. His eulogy on the Duchess of Cadaval possesses all the charms of language. Little did her Grace imagine, that those charms were like the charms of Circe; or that Dr. Dohmeyer was capable of contaminating her children with bestial humours, and transforming them into brutes.—It is as follows.

"Her Excellency the Duchess of Cadaval has claims to eternal gratitude, for having been the first,

who, like an enlightened mother, spurned the prejudices of the vulgar against inoculation; thereby securing to her children life, health and beauty. What delight and pleasure must she derive from this source, as long as she lives, from the reflection of having redeemed by her example, thousands who would have been cruelly sacrificed to that dreadful distemper, the small-pox! Posterity will bless her name; and parents will at length be persuaded, that they are not less under an obligation to inoculate their children, than to afford them food and raiment.

"What difference is there between assassinating a child, and abandoning it to the mercy of that destructive pestilence? Is it possible there can be a mother, that could bear to hear the voice of her child, whose death has been occasioned by the small-pox, crying to her from the grave, O insensible and inhuman mother! why have I been thus sacrificed? What excuse can you offer, for having stifled the voice of reason, which pointed out the most safe and effectual means of saving me? Why have you lent an ear to prejudices, to which I have fallen a victim? O barbarous, cruel woman! unworthy the name of mother! would to God, thy remorse may be lasting, that other mothers, when they contemplate thy misery, may shew themselves in future, more solicitous for the safety of their offspring!"

In page 750, I have already given some account of Dr. Husson's publication on the same subject,

from a French review. The original being now in my possession, I shall state his sentiments more at large.

"Among all the useful discoveries," says the learned author, "by which the century just elapsed is rendered illustrious, and by which the empire of the sciences is enriched,—medicine may pride herself in being able to offer to posterity the inoculation of the small-pox, and that of the Cow-pox, as monuments to perpetuate her glory."

Dr. Husson affirms, that the preservative power of vaccine inoculation is now fully proved, not only in England, but also in various parts of Germany, Switzerland, Italy, and France. He asserts, that without having recourse to the experiments made in other countries, France herself has sufficiently ascertained this important fact.

"Vaccine inoculation," adds he, "is no longer a question to be resolved; we ought no longer to look on it as an experiment. Its preservative property is one of those grand truths acknowledged in medicine; and there is no doubt, but in a very short time, all ranks of society will avail themselves of its benefits.

"Let us hope, that all wise and enlightened governments will avail themselves of this valuable discovery, to repair the waste of war.—They cannot remain indifferent concerning the means of annually

snatching from death a tenth part of their population; concerning the means of peopling their territories with men and women of good constitutions, whose strength and beauty shall have nothing to fear from the ravages of the small-pox.

"It will be sufficient, carefully to stop every avenue by which fresh contagion might be introduced, by the same means as have succeeded, in banishing from our climes the leprosy and the plague; scourges which the East frequently vomited forth, in former times, on our continents; but which lazarettoes and quarantines have at length suppressed.

"We shall then know the history of the small-pox, only as we know that of the leprosy. The mass of our diseases will be diminished; there will every where be more security, and consequently more happiness; posterity will bless the memory of Jenner, and ages to come proclaim him one of the greatest benefactors of mankind."

Another work, a work from which vaccine inoculation, and medical science in general, derive new lustre, has been published at Vienna, by Dr. De Carro.—It is dedicated to Lord Minto, the English ambassador, in the following words.

"The healing art is indebted to England for a vast number of useful discoveries; but no one constitutes so memorable an epocha, or promises such real ad-

vantages to mankind, as that of vaccine inoculation; of which the direct aim is, to annihilate the destructive scourge of the small-pox.

"England already acknowledges Jenner as one of her greatest benefactors; and all civilized nations are emulous of sharing the benefits of this brilliant discovery."

The learned author declares, that having been the happy instrument of introducing this beneficial practice into the Austrian dominions, he owes to the representative of Great Britain this homage,—this testimonial of his first success.

He says, the property which the Cow-pox possesses, of being a preservative against the small-pox, was in some measure known to the peasants; but their reports did not gain credit.—"It is, therefore, to Dr. Jenner alone we are indebted for this discovery. It was he who first published a considerable number of direct experiments, made with a view to verify this popular opinion. It is he who has had the constancy to occupy himself in that undertaking for more than seven years, with the most laudable zeal. It is he who already enjoys the happiness, of seeing how much attention his labours have excited in his own country, and in the whole world.—It is he, therefore, whose name shall be transmitted with honour to the latest posterity."

Dr. De Carro is of opinion, that in those countries where the small-pox is most favourable, it proves the perdition of a tenth part of the human species. He ascribes the neglect of the advantages which variolous inoculation promised, partly to the anguish which parents feel, when that practice has been fatal to their offspring; partly to the prejudices which prevail; and partly to the want of encouragement in governments, who have done little or nothing towards propagating this preservative among the indigent class of society.

" Besides," adds Dr. De Carro, " as the most zealous advocates for inoculation of the small-pox cannot deny, that this disease is frequently dangerous, that it disfigures the countenance; that it serves to spread the contagion; and, in short, that it bears a resemblance to the natural small-pox; it is certain, that a method which obviates such weighty objections, will be the greatest blessing which the healing art can confer on mankind.

" The discovery of vaccine inoculation combines all these advantages. Innumerable experiments made in England, and in many parts of the continent, prove this in a most satisfactory manner. I do not believe it is possible to find even one single person, who, knowing the facts that have contributed to establish this truth, can carry his scepticism so far as to doubt it."

The end which Dr. De Carro proposes to himself in publishing this work is, to collect those proofs, to present them to the public in a methodical and regular form; to enquire into the opinions of the most celebrated inoculators, on all the interesting points of theory and practice, which constitute the doctrine of vaccine inoculation; and not to deliver his own opinion, till after the result of the numerous observations and experiments which he has had an opportunity of making, in this new species of inoculation.

To facilitate as much as possible the circulation of his work, which is written for the sake of parents, as well as medical men, it has been translated from the original French into German, by Dr. Portenschlag, jun. under the inspection of the author.

After a very correct and faithful history of the rise and progress of vaccine inoculation, the learned author observes, that although some difference of opinion still prevails, with regard to the theory, the practice appears to him to be already advanced to such a degree of perfection, as to leave little or nothing to wish in that respect.

He maintains, that we have no longer any room to doubt concerning Dr. Jenner's principal position, that the Cow-pox is a certain preventive of the small-pox. He had at that time intelligence of above

twenty thousand cases of persons inoculated with the Cow-pox; but knew of no instance, in the smallest degree authentic, wherein it was supposed to fail.

Dr. De Carro was informed, that the Cow-pox is indigenous in the duchy of Holstein. A person who resided there three years saw it repeatedly. He states, that the disease is there called *finnen*. Men, as well as women, milk the cows in Holstein; and, when old horses are attacked with the grease, called *mauke*, they are often put into the cow-houses, and consigned to the care of women. It is also said, that children have been inoculated with vaccine virus, in that part of the world, for the preservation of their beauty.

It is but justice to Dr. De Carro's work to say, that his plate contains an accurate representation of the vaccine pustule in different stages.

In this publication we meet with an account of the inoculation of Count Mottet, with vaccine matter. Having had the small-pox in his infancy, he wished to try this experiment: which produced the spurious matter already noticed, and deceived the various inoculators to whom it was sent. This error will not be equally excusable, should it again be committed; since the distinctions between the genuine and spurious pustules are sufficiently discernible. In the present instance, the whole arm was inflamed eight hours after inoculation; and an extensive tumour was formed before the third day.

Dr. De Carro alludes to the pustulous eruptions at the Small-pox Hospital. He thinks it by no means difficult to determine, what appellation they deserve; and that the name of the establishment where they occurred, is alone sufficient to resolve this problem.

It appears to him, that when experiments were to be made, in order to fix the public opinion concerning this new method of inoculating for the *Cow-pox*, the *Small-pox* Hospital was not the place we should select for that purpose.

Vaccine virus, it is well known, has been preserved above three months, and proved efficacious; Dr. De Carro relates an instance where matter succeeded, which he had received from England, in a letter dated the 20th of March, 1799, and used on the 23d of September. This is the more remarkable, on account of his having constantly carried it in his pocket, from the time of its reception.

Dr. De Carro has never been able to produce a pustule with matter received from England on glass, though diluted with ever so small a quantity of water. He therefore prefers thread, as more likely to ensure success.

Dr. De Carro disapproves of inoculating by means of a blister, both on account of the greater pain, and the greater uncertainty, with which that method is attended.

The learned author considers it very important to decide, whether it is necessary that a patient should have an evident febrile affection, in order to be secure from all danger of the small-pox. This question he answers in the negative; contrary to what was at first imagined by those who wrote on the subject. In this opinion he is countenanced by the latest experience of the principal inoculators in Great Britain, and on the continent of Europe.

Dr. De Carro remarks, that when the scab succeeding the vaccine pustule is prematurely rubbed off, suppuration ensues, from which another scab is formed. This is not of so dark a colour as the first, but similar to the incrustation which is produced by any other sore. Hence Dr. De Carro judiciously cautions us, never to take matter for inoculation, when it has a purulent appearance; whether that purulency can be accounted for or not. This, he justly observes, is a circumstance of so much importance, that it can hardly be repeated often enough.

Dr. De Carro observes, that few people have taken the trouble of enquiring into the advantages of vaccine inoculation; and that no persons give their opinion on this point in a more decisive manner, than those who are least acquainted with the subject.

The ingenious author proves, by a number of incontestible arguments, the benefits that must result from the new practice. He then adduces five cases,

in which persons inoculated with the Cow-pox had previously received the infection of the small-pox; which manifested itself a few days after the insertion of the vaccine virus.

In all these cases, we are told, the small-pox was astonishingly mild; and that, in a season when scarcely an instance of benign small-pox was to be seen. Whether the Cow-pox mitigated the violence of the small-pox, is a question, which, Dr. De Carro candidly confesses, five cases do not enable him to resolve. Since, however, the result of his observations is exactly similar to that of other eminent practitioners, in different parts of the world where this happy discovery has been adopted, we may be permitted to indulge the pleasing hope, that the enemies of this practice, and of humanity, will soon be deprived of the only plausible excuse they can now allege, for prolonging, and, as far as in them lies, perpetuating, the most dreadful calamity that has ever befallen the human race.

"Who," says Dr. De Carro, "will not recognise in this marvellous discovery, one of the great means, by which the wisdom and the goodness of the Creator maintains the balance of the universe, in repairing by a signal benefit, part of the evils which are inseparable from human nature? Is it not intended to remedy one, which has been the desolation of Europe?"

The author notices the opposition which this practice has met with; and the ridiculous objections urged against it; he expresses a hope, that the perfect resemblance of the experiments made at Vienna with those of our English physicians, will add no small weight to the certainty of this method.

One remark of Dr. De Carro is rather surprising. In answer to the insinuations of an anonymous author in the Hamburgh gazette, he says, there is but one species of Cow-pox. This error is unaccountable; since Dr. Jenner has so accurately described two species, the genuine and the spurious, in his first publication. As to the apparent failures alluded to, they are in some instances owing to matter which never was genuine; and in others, to such as has undergone a change; from whatever cause that change may take place.

Dr. De Carro is of opinion, that a spurious pustule, like that of Count Mottet, can only impose on those who are totally unexperienced; as he himself was, when he sent matter procured from that pustule to Geneva. He declares, he cannot comprehend, how any experienced person "should ever be deceived, in regard to the character of the genuine pustule. It resembles nothing but itself."

Dr. De Carro prefers the mode of inoculation by puncture; which, he thinks, cannot be made too slight, or too superficial.

He gives an account of the establishment of vaccine inoculation in Bohemia. When the reigning Prince of Lobkowitz was about to leave Vienna, Dr. De Carro inoculated with fresh virus an infant, whom Dr. Schenk, physician to the Prince, had brought to Vienna for this purpose. With the matter thus produced inoculation is now practised at Baaden, with the greatest success.

Our ingenious author thinks it is no wonder so many mistakes have arisen, when every one who can hold a lancet, thinks himself qualified to practice.

Dr. De Carro has inserted a letter from Dr. Jenner, by which it appears, that Dr. Jenner is convinced a person may have the regular and efficient Cow-pock, without any sensible indisposition; an opinion in which all the principal inoculators are now agreed.

At the conclusion of the work we are informed, that vaccine inoculation is planted in Hungary; and the faculty of Pest have come to a formal resolution, to adopt the practice.

I cannot take leave of this very valuable publication, without expressing the high sense I entertain of the importance of the work; of the ability displayed in its execution; and of the services rendered to the great cause of humanity, by the indefatigable exertions of Dr. De Carro.

The sale of this book has been so rapid, that a second edition is already published; and will undoubtedly meet with a favourable reception.

Dr. De Carro having done me the favour to send me a copy of this edition, I shall proceed to give an account of the most important additions which it contains.

We are informed through this authentic channel, that the new inoculation is making a considerable progress at Constantinople; and that another infant of Lord Elgin has been submitted to that salutary operation.

The report of Mr. Coleman having succeeded in producing the Cow-pox from the matter of grease, is erroneous.

We have the satisfaction to learn, that Dr. Hellvag, of Eutin, mentions several persons who had received the infection of the casual Cow-pox, and afterwards resisted the small-pox. He also informs us, that several country people had inoculated themselves, from having long known the antivariolous power of the Cow-pox.

Dr. De Carro justly censures the plates accompanying certain German publications on the subject of the vaccine disease. He says, they are abominable; and of such a forbidding aspect, that they are suf-

ficient to frighten any tender mother. Such, he observes, are those of the professors Kuhn of Leipsic; and those of Dr. Osiander of Gottingen, which I have already noticed. How an encomium on the latter found its way into an English Review, it is not for me to explain. Certain it is, that in this department of English literature, too much negligence and inattention prevail.

The Hanoverian physicians have at length received vaccine virus from Dr. De Carro; and now their patients are no longer troubled with *the small-pox.*

The learned author observes, that when the English physicians have sent threads impregnated with matter at the Small-pox Hospital, to every part of Great Britain, and to the four quarters of the world, we cannot be surprised at hearing of pustulous eruptions accompanying the Cow-pox. This is true; and we may add, that the disease was likely to prove the more fatal, when it neither found the patient prepared to receive, nor the public to shun the infection. Of this truth, Europe and America already bear ample testimony. The small-pox is not the less baneful, because it ravages the globe under another name.

Dr. De Carro observes, that it is no wonder we still find parents, who are averse to novelties, and in want of information on the subject, prefer the inoculation of the small-pox; but he justly thinks, that

it is an unpardonable cruelty in a medical practitioner to follow their example; since he cannot plead the same excuse.

The learned author remarks, that the confidence of those medical men, who fancy, that because the Cow-pox is a trivial complaint, it is unnecessary to study its principles before we commence the practice, is enough to make those, who are sensible of that necessity, tremble. He had received information from Geneva, that "a physician of Savoy had propagated a degenerate kind of Cow-pox in the neighbourhood of the city of Thonon; where he inoculated about eight hundred persons. The small-pox, which since prevailed in those parts, did not spare the unfortunate patients who had been inoculated by this imprudent man. He has paid dearly for his ignorance; for his own children have been among the number of those, who have fallen victims to the small-pox.

The advantage of vaccine inoculation in cutaneous disorders, is confirmed by the practice of Dr. De Carro; who relates a case, where a child seven years of age, who had been troubled with an herpetic eruption over the whole body for three years, which had resisted the most active remedies, was instantly cured by vaccine inoculation.

Our author relates five instances, in which vaccine matter failed, although it was taken from a pustule,

from which several persons were inoculated the day before with perfect success. The whole five were afterwards inoculated; and took the disease in the most regular manner. This Dr. De Carro attributes to the different degree of susceptibility prevailing in the patients at the different periods when inoculation was performed: but is it not more likely that the failure was owing to the pustule having been exhausted the preceding day, or to the lateness of the period when the virus was taken, than that so many persons who had not had the small-pox, should all prove insusceptible at the same moment?

Our author quotes an expression in a letter which he had received from Dr. O'Reilly, one of the most distinguished and the most learned physicians of Prague; who, after he had practised vaccination in a very extensive degree, and studied it profoundly, wrote to him as follows: "that he perceived a spirit of observation was much more necessary in the inoculation of the Cow-pox, than in that of the small-pox.

Dr. De Carro agrees in opinion with every author who has written on the subject, that all well informed persons, without exception, are convinced of the necessity of a profound knowledge of the subject, in order to practice vaccine inoculation with advantage. The ignorant alone proportion their enquiries to the extreme lightness of the disorder; and think

they may practice with safety, though their study has been as superficial as their own understandings.

Our learned author observes, that it impossible to mention every publication, with which the press now teems in every civilised country. Professor Hecker of Erfurt has published a catalogue of those which he has been able to collect. To give a detail even of the titles, would only tire the patience of the reader. It is therefore the duty of every author, who professes to write the history of the new inoculation, to present his readers with an account of the best publications on the subject; and not to attempt an analysis of that inundation of vaccine literature, with which the continent of Europe is now overwhelmed.

It is, as Dr. De Carro justly observes, very remarkable, and very satisfactory, to see, that during the space of three years, when the attention of medical men and of the public has been so particularly directed to vaccine inoculation, no work has hitherto appeared, which tends to invalidate the certainty of the practice.

Dr. De Carro takes notice, that no person has furnished a more convincing proof of the difficulty of contending against vaccine inoculation than Dr. Herz, the Aulic Counsellor of Berlin; who has laid down excellent precepts for making experiments, and neglected them all. He has advanced unfavourable reports against the Cow-pox, without deigning to men-

tion either persons, places, or times. Hence it appears, that this gross and illiberal attack was written by the aulic counsellor, and not by the physician. False assertions may pass unnoticed in the statesman; but they will undergo a strict scrutiny in the medical man.

After noticing another antivaccinist, Dr. Ehrmann of Frankfort, our author tells us, that one antivaccinist, who had threatened to explode the practice, finding himself foiled in his attempt, blew out his brains. It remains, however, to be proved, that an opponent of vaccine inoculation has committed such a crime, or has any brains to blow out.

Dr. De Carro has inserted a letter from the Earl of Elgin, the British Ambassador at Constantinople, expressing his grateful acknowledgments for the vaccine matter sent by Dr. De Carro. With this matter his Lordship's infant was inoculated, with the happiest success: and, with the virus thus produced, vaccine inoculation was extended.

One portion of this Cow-pock matter was given by his Lordship to Capt. Bainbridge, the commander of an American vessel; who inoculated with it one of his crew, who was afterwards exposed to the contagion of the small-pox, and inoculated six times with variolous matter, but in vain.

Dr. De Carro has favoured us with some general hints concerning the means of facilitating the inocu-

lation of the Cow-pox, and consequently extirpating the small-pox. He observes, that vaccine inoculation is an infallible preventive of the small-pox; that it is exempt from danger, and never infectious; and that it is treason against humanity, to persist in inoculating for the small-pox.

He reprobates the practice of inoculating for the Cow-pox, which is scarcely to be called a disease, at an hospital where the patients are liable to catch a disease attended with danger.

He endeavours to justify the custom of selling matter, by remarking, that persons who have their children inoculated, commonly make a present to the parents of the children from whom matter is taken, if they are poor; and to their servants if they are rich. He also takes notice, that it was usual in the oriental regions, and with the peasants of different countries, who, as I long ago observed in the London Medical Journal, practised inoculation before we were even acquainted with its name, to call that process buying the small-pox. This proceeded from the custom established among them, of making the person who was inoculated pay for the benefit of the operation.

We are informed by Dr. De Carro, that besides the proofs of the preventive faculty of the Cow-pox which he had exhibited at Vienna, a considerable number of physicians in the provinces of

Germany, and in other countries, to whom he had sent vaccine matter, had obtained the same results. The young Countess of Mareil, whom he had inoculated in the month of September, 1800, was submitted to the test of variolous infection at Paris, in the month of December 1801, being inoculated with six punctures, but in vain.

Vaccine matter procured from Italian cows, the success of which in London I have already announced in the Medical Journal, has also been sent by Dr. Sacco of Milan to Dr. De Carro; in whose hands it proved equally successful; producing pustules exactly similar to those, excited by the matter which was received from England.

Our author mentions in terms of the warmest approbation, the labours of Dr. De Vest, of Clagenfurth, who had the merit of establishing vaccine inoculation in Carinthia; and of practising it with great skill and success. He also bestows high encomiums on Dr. D'Outrepont; to whom the Archbishopric of Saltzbourg is indebted for the introduction of so valuable an art. The government of that country testified a due sense of his zeal and talents, by sending him into a number of villages, to check the ravages of an epidemic small-pox, which was raging there; and to instruct surgeons in this beneficial practice.

Dr. De Carro has paid a laudable attention to the effects of vaccine inoculation in brute animals.

I trust he will persevere while any part of that interesting subject remains unexplored;

Nec tibi cura canum fuerit postrema.

The result of experiments made on the canine race is so different, in the practice of different persons of distinguished celebrity, that I consider it unnecessary to enter into any detail of particulars on that head, farther than to say, that in dogs the pustule is said to want the areola, with which it is surrounded in the human subject. This corresponds with the few cases which I have seen.

Some are of opinion, that a pulmonary affection, manifesting itself by a cough, is a concomitant of vaccine inoculation in dogs. This opinion is countenanced by the experience of Dr. Jenner and Count Salm. It is contrary to that of Dr. Valentin of Nancy, and Dr. Sacco. Time, and multiplied experiments, must decide this question. With respect to the preservative property of vaccine inoculation in quadrupeds, I consider that point as still *sub judice*.

Dr. De Carro justly esteems the experiments on brute animals of great importance; and earnestly entreats all those who are engaged in them, to communicate to him the result of their observations. I perfectly coincide in opinion with him, that the progress we have already made in vaccine inoculation, ought to redouble, rather than to relax our zeal;

and that nothing is so prejudicial to the advancement of the sciences, as to consider them perfect.

I have been the more diffuse in my account of this excellent work, because I regard it as one of the best treatises hitherto published on the subject of vaccine inoculation. If any thing can add to the well-merited fame of the author, it is that ardent zeal and enthusiasm which he has displayed, in the propagation of the practice.

Dr. De Carro observes, that the University of Edinburgh has given a sanction to this valuable discovery; Dr. Russell having chosen vaccine inoculation as the subject of his inaugural thesis. Other candidates for honours, in that distinguished seat of medical science, have followed his example. One dissertation on that subject, by Dr. Best, who graduated in the year 1801, is now in my possession; and, I doubt not, will afford others the same pleasure which I have received, from its perusal.

He has two very happy mottoes prefixed to this dissertation. One is taken from Cicero;

Ad illam pestem comprimendam, extinguendam, funditus delendam, nata esse videtur.

The other we should suppose to have been taken from Horace, did we not know, that inoculation was not practised in his time. It is as follows:

" Te mater omnis, te lachrymabilis
Adcurret uxor, ne caducum
Orba virum puerosque ploret:

Seu confluentes forte timet notas
Decora virgo,—tu faciem eripis
Periclitantem, protegisque
Delicias juvenum futuras."

To thee shall weeping wives and mothers fly,
Or see their husbands and their children die;
To thee the virgin trust her lovely face,
Or some rude blemish rifle ev'ry grace.

Oh, ward the perils that around her wait!
Oh, shield her beauties from impending fate!
Nor let a cruel pestilence destroy
The hope of youth, and pledge of future joy!

Dr. Best observes, that no one is ignorant what improvements have been made, within a few years past, in science in general, and medicine in particular. But he maintains, that among all the most celebrated discoveries, to which the enterprising spirit and the industry of modern philosophers and physicians have given rise, that of vaccine inoculation justly claims the first honours.

He remarks, that the pleasing hope which springs from this source, the hope of extirpating a cruel and destructive disease, must fill every benevolent mind with transport; and that we are under an inexpressible obligation to the illustrious Jenner, whose happy investigation of the subject has disclosed this signal benefit to mankind.

The ingenious author has given an accurate history of the disease, drawn from the best authority. He has, however, fallen into an error, in respect to ulceration of the arm; which, he asserts, is a more frequent occurrence in the country than in town. Mature experience has now corrected this erroneous opinion.

With regard to the infant, whom Dr. Best states to have fallen a victim to an universal erythema, whoever peruses the preceding pages of this treatise will have reason to believe, that the erythema was occasioned by external violence and subsequent neglect; and that the unfortunate patient never had the vaccine disease.

Dr. Best concludes his valuable and interesting dissertation, in the following emphatic words. "It is unnecessary to state, what an advantage vaccine inoculation has rendered to the human race.—Being attended with no danger, and scarcely with the least inconvenience, it inspires us with a pleasing and a well-founded hope, that a time will come when we shall utterly annihilate a disease, which, for the last thousand years, has destroyed a tenth part, or more than a tenth part of mankind."

Another inaugural dissertation on the same subject, is from the pen of Dr. Tierney; who graduated at Glasgow, in April, 1802.—His motto, likewise,

which is taken from Horace, appears to have been destined for the subject.

"Avertit morbos, metuenda pericula tollit."

It may be seen by the works of Dr. Jenner, that Dr. Tierney had some share in confirming his opinion of the preservative property of the Cow-pox; having found it impossible to communicate the infection of the small-pox, to those who had undergone that disease. Hence he was induced to make a farther enquiry into the subject.

He observes, that although the Cow-pox and its salutary effects were not unknown in some places, yet for a general and accurate knowledge of the disorder, the world is indebted to the benevolence and perseverance of the ingenious Jenner; which are beyond all praise.

Dr. Tierney proposes the following definition of the vaccine disease, in the human subject.

It is "a disease, arising from a specific contagion; attended with inflammation; and a pustule, which, about the twelfth or thirteenth day, is surrounded with an efflorescence, and always leaves a pit behind."

Dr. Tierney gives an account, of his having inoculated thirty persons with one species of spurious matter; and seventy with another. The first was taken

from a genuine pustule, on the tenth day; the latter was procured from a medical man in the neighbourhood, and was puriform when Dr. Tierney received it.

The spurious generation, thus produced, ran their course in a manner so perfectly similar to that described by other inoculators, and so frequently recorded in the first volume of this treatise, long before the publication of Dr. Tierney's thesis; that we cannot but be rather surprised, at his thinking this part of the subject of vaccine inoculation has hitherto been too much neglected; and that a criterion of the genuine pustule was still a desideratum.

Non obtusa adeo gestamus pectora Pœni.

Ever reader, however, must coincide in opinion with our ingenious author, that if one understanding was so clouded, or one mind so perverse, as not to be convinced of the origin of the disease by the substantial evidence before offered to the public; not a shadow of doubt can remain in the mind of any person, after the experiments of Dr. Loy; an account of which was published in the year 1801.

Early in the spring of that year, Mr. Loy, surgeon at Pickering, observed a disease, which, Dr. Loy imagines, had not been noticed in any but the western parts of England. It will appear, from a perusal of this treatise, that it had been discovered at

Eastbourn, by Mr. Rankin, previous to the publication of Dr. Jenner's first work on the subject.

Mr. Loy's first patient was a farrier, who applied to him with an eruption on his hands. This consisted of distinct pustules; containing a thin fluid, and surrounded by an inflamed ring. The vesicles resembled those arising from a burn; but they were all regularly circumscribed; and a small dark speck was visible in the centre of each of them. This man had been dressing the heels of a horse affected with the grease; and it is worthy of remark, that he had previously had the small-pox.

The next case occurred, in a man who had not had the small-pox. Vesicles appeared on both hands, particularly about the roots of the nails, while he was in the habit of dressing the heels of a horse affected with the grease. The lymphatics were inflamed as far as the armpit, where a swelling took place. A pustule, similar to those on the hands, was produced near the eyebrow; occasioned by his scratching that part, and inoculating it with his finger.

This patient, Dr. Loy informs us, had a considerable degree of fever, which obstinately continued, till absorption from the pustules was prevented, by destroying them with caustic; when the tumor of the axilla likewise dispersed.

With virus taken from this patient, Mr. Loy excited in the human subject a mild disease, exactly resembling the genuine Cow-pox.

With matter produced at the same time, from the same source, Dr. Loy produced in the udder of a cow, a vesicle surrounded by a rose-coloured rim; and attended with considerable induration, inflammation, and pain. The vesication continued to spread for several days; but at length a scab formed, and the place healed without any remedy.

Two children, who were inoculated with matter from the udder of this cow, had the vaccine disease in the usual manner; and proved insusceptible of the small-pox.

Dr. Loy next inoculated another cow with limpid matter of grease; and the result was a vesicle, containing a watery fluid, of a purple tinge. A child who was inoculated with this virus, resisted the action of variolous matter, inserted in three different places, with the greatest care and attention.

Matter obtained from the same horse, produced in a child a vesicle of a purplish colour. In this case, both the local and constitutional symptoms were more violent, than in those who are inoculated with matter taken from the cow.

Five children were inoculated from that, whose

case is last mentioned. In these also, there appeared some remains of virulence. The vesicles were surrounded with an extensive erysipelatous efflorescence. They all resisted the infection of the small-pox.

A number of attempts to produce the Cow-pox by the matter of grease, proved unsuccessful. At length, however, Dr. Loy was so fortunate as to find in the heels of a horse, matter in a limpid state; about the fourteenth day of the disease; and a week from the first appearance of the discharge. This excited the disease, not only in those instances which are already described; but also in three cows, whose cases are not particularized.

One discovery, made by Dr. Loy, is of no small importance. He has ascertained two species of grease; one which is merely local, and not infectious; another, which is infectious, preceded by fever, and considerable indisposition, and relieved by a general eruption.

It appears, from the observations of Dr. Loy, that the small-pox has considerable influence in preventing the action of grease on the system. It also appears, that the regeneration of this valuable fluid is essential to the grand purpose for which it was destined; since it serves to correct and mitigate the disease.

I have already made honourable mention of an Essay on Vaccine Inoculation by Dr. Colon; who afforded the infant practice an asylum under his hospitable roof. An elaborate History of its Introduction and Progress in France, published in the year 1801, is a lasting monument of his ardent zeal, for the propagation of the principal improvement which the healing art can boast.

Dr. Colon observes, that at the very time when in England a medal was presented to Dr. Jenner, which consecrates his name to immortality,—in France, vaccine inoculation met with greater opposition than ever. This is what might naturally be expected. It was at the moment when vaccine inoculation was about to be established on a firm basis, that the sordid and mercenary practitioner, who considered the small-pox as his legal inheritance, began to tremble.

It is rather surprising Dr. Colon should still entertain the erroneous idea, that Dr. Simmons had united his efforts with those of Drs. Woodville and Pearson; and that the success with which his daily labours were crowned, had a considerable share in extending vaccine inoculation; when, it is well known, that he had not adopted the practice. The experiments of Mr. Simmons of Manchester, which gave rise to this mistake, had no tendency to sanction the theory of Dr. Jenner.

The learned author enumerates the different countries, where the new inoculation is established. Among others, he mentions Spain; where, he informs us, it is practised by order of Government; but he confines himself to the recital of the circumstances attending its introduction and progress in France.

His own generosity, in fitting up his house in the neighbourhood of Paris, at a great expense, for the reception and accommodation of those who were to be inoculated, can never be forgotten. He informs us, that Lucien Bonaparte, Minister of the Interior, and the Prefect of the Department, displayed the most ardent zeal in promoting the object in view. They could not remain idle spectators; they could not continue in a state of stoical apathy, as too many men in power have done, while their fellow-citizens were perishing around them.

Dr. Colon gives a detail of the proceedings of the Medical Committee, and Dr. Vaume's apprehensions for the fate of the small-pox. He then informs us, what progress vaccine inoculation had made in France.—In Paris, it was becoming general, and spreading with a rapidity beyond calculation.

By a letter from Dr. Aubert he learns, that all Geneva is vaccinated; and that the inhabitants of the country villages, furnish the only means of preserving the sacred flame.

Dr. Nowel, of Boulogne, availing himself of the opportunity of inoculating with virus taken from the patients of Dr. Woodville, spread the practice, of which he had studied the nature and advantages when he was in England, through all the neighbouring towns. By his unremitting exertions, and indefatigable zeal, a thousand persons had been rescued from the ravages of the small-pox.

Dr. Valentin, of Nancy, who, by his writings and his practice, had already established the inoculation of the small-pox, and his own fame, saw in vaccine inoculation, nothing of that alarming nature which had been seen by certain Parisian inoculators; he saw in that new practice, nothing but what tended to alleviate the afflictions of suffering humanity.

Instead of condemning it without a trial, he read a memoir on the subject before the Medical Society; and, at their next meeting, presented to them his own daughter who had been vaccinated a few days before, to confirm the truth of his assertions. The Society, at first reluctant, at length appointed a committee to prosecute experiments in vaccine inoculation. Eleven hundred persons had been secured from the small-pox. Dr. Valentin had been seconded in his humane and patriotic exertions by Citizen Lemoine, an eminent surgeon of the same place.

Citizen Tarbes distinguished himself, by present-

ing a memoir on the subject of vaccine inoculation to the Lyceum of Toulouse; and by extending the advantages of the practice to the troops in that quarter, as well as to the poor. The number of persons inoculated in that city amounted to two thousand.

At Tours also, this beneficial practice was readily adopted, and widely extended by the enlightened zeal, and humane exertions of the Medical Society. Certain persons, tempted by sordid lucre, having sold vaccine matter, which was taken at improper periods, and produced a spurious pustule; the Society applied to the Prefect on the occasion; and all the officers of health being informed that the Society would distribute matter gratis, the evil was nipped in the bud.

Dr. Colon pronounces a just eulogium on Mademoiselle Deham de-Weridan; who went to Boulogne, and was inoculated by Dr. Nowel. On her return home, she inoculated her mother and six children; and had the happiness of securing them all from the infection of the small-pox. She also communicated the benefit of this preservative to the poor; to such, at least, as had escaped the destructive pestilence raging around them.

It is unnecessary to follow our ingenious author, in his enumeration of all the principal towns in France, in which the new practice was planted. Suffice it to say, that in consequence of the zealous and indefatigable exertions of the most enlightened me-

dical men, and the patronage of the magistrates, it began to be received with general enthusiasm; and we may be permitted to indulge the pleasing hope, that it will ultimately triumph over all opposition.

Dr. Colon bestows a well-merited encomium on the ardent zeal of the French physicians and surgeons in general, in adopting and propagating the discovery of the immortal Jenner; a discovery which, he justly observes, claims the attention of every friend of humanity. He maintains, that the Cow-pox is a certain preservative against the small-pox; that this truth is demonstrated in the most authentic manner, by the experiments which have taken place in every part of France; and that wherever the small-pox has committed its ravages, those who had undergone vaccine inoculation were the only persons, who remained inaccessible to the malign influence of that merciless distemper.

The learned author relates several instances, in which variolous infection seems to have been superseded by vaccine inoculation. He confirms the opinion already entertained, that the genuine Cow-pock is seldom excited in those who have had the small-pox. He mentions, however, one exception, which occurred to Dr. Valentin, who having inoculated himself in the wrist, produced two vaccine pustules, of the same appearance and character with those of other persons, who had been submitted to vaccination.

Many instances are cited by Dr. Colon, to evince the utility of the vaccine inoculation, in cutaneous disorders, and in scrophula; and to prove, that when it is performed too late to supersede the small-pox, it is commonly observed to assuage the violence of that disease.

Our author adds his testimony to that of other experienced practitioners, that where the vaccine pustule runs through its regular course, the patient is secure from the future infection of the small-pox; although no areola should appear, nor any constitutional indisposition be perceived.

Dr. Colon concludes with expressing his opinion, that we ought to banish all idea, of deferring vaccine inoculation on account of certain chimerical and ill-founded fears. He observes, that as it is prudence not to admit any thing without examination; so it is prejudice and folly to reject, what experience proves to be beneficial.

He avers, that the advantages of vaccine inoculation, attested in England, are so fully confirmed in France, as not to leave a shadow of doubt on the subject. He asserts, that although his labours are imperfect, from his not having received a report from all the distant parts of the Republic, yet they are sufficient to shew, how far vaccine inoculation has interested men of generous minds, devoted to the state, and to the allevation of the woes of suffering humanity.

He has developed, as he truly affirms, the plots which were so perfidiously devised by certain ancient inoculators, to arrest the progress of the most brilliant discovery that the healing art can boast. He has informed the world, what protection this discovery received from such magistrates, as are distinguished for their philanthropy, and their illumined understanding.

"In drawing this sketch," says our patriotic and benevolent author, "the only praise to which I aspire, is that of being useful: too happy, if my wishes are accomplished; and if the public, truly enlightened with regard to their own interests, unanimously adopt a preservative, which it is altogether a blessing to accept, and altogether a misfortune to refuse."

According to Dr. Colon's computation, from sixty to seventy-two thousand human beings annually fall a sacrifice to the small-pox, in France. The Athenians deified Theseus; who delivered them from a monster, which annually devoured seven victims. France, delivered from a pestilence, which, in the same space of time, has devoured seventy thousand, though she cannot erect altars to the memory of her deliverer, will not be less grateful.

The next article which comes under my revision, is a dissertation on the same subject, presented to the special school of medicine at Strasbourgh, by Citizen Chauvot.—It is a sensible and well-written

performance; giving an accurate account of the rise and progress of the new practice. He informs us, that Citizen Villars, jun. Surgeon of the Military Hospital at Grenoble, had published the result of his observations; by which it appeared, that he had inoculated three hundred persons with vaccine virus, in whom the disease was extremely mild. The practice of his colleagues, both in town and country, was attended with the same success.

Citizen Lemerchier, a physician of Peronne, had vaccinated two hundred and thirty-four persons, at a period when the small-pox raged there in all its fury; nevertheless, not one of them was infected with that disease.

At Dax, and in its environs, persons of every age, sex, and condition, were vaccinated with success; although an epidemic small-pox reigned there, and proved uncommonly fatal. Numbers of those inoculated with vaccine matter, were exposed to variolous infection in every form, but always with impunity. Happy would it have been for Paris, if this preservative had been generally known previous to the seventh year of the Republic, when, in that city alone, fifteen thousand persons perished of the small-pox.

Citizen Chauvot labours under a mistake in supposing, that the measles are always suspended by the small-pox. He also labours under a mistake in sup-

posing, that government had granted Dr. Jenner seventy thousand pounds for his discovery. It is true we had at that time persons at the helm, who considered so many thousands, when squandered in the war department, and in the *destruction* of mankind, as no more than *cheese-parings and candle-ends;* but, if we may judge from the whole tenor of their conduct, they think the *preservation* of all the human species not worth half the sum.

I have now before me a small tract on vaccine inoculation, by Dr. Rouger, of Vigan, in France; who had practised the inoculation of the small-pox in an extensive degree thirty-four years, and introduced the Suttonian method into that part of the French dominions with great success.

With a candour truly exemplary, he confesses, that vaccine is far preferable to variolous inoculation; and that he has succeeded in checking the progress of the small-pox, in every place where he has introduced the Jennerian practice. He acknowledges, that the small-pox, though artificially excited, is still to be considered as a disease requiring medical assistance; while the Cow-pox is so mild an indisposition, that inoculation with vaccine matter may, in his opinion, be safely confided to the care of persons who are ever so little instructed in that art.

Of all the publications to which vaccine inoculation has given rise, on the continent of Europe, no

one merits greater attention than that of Dr. Sacco, of Milan, entitled Practical Observations on the Use of the Cow-pox, as a Preservative against the Small-pox.

He asserts, that the inoculation of the Cow-pox will make an epoch in the annals of medicine and humanity. He asserts, that in Europe, according to the most moderate calculation, fifteen millions of human beings fall victims to the small-pox, every twenty-five years. In Rome alone, six thousands perished by that destructive disease, in the short space of six months. He agrees with Haller, that the small-pox is a disease, which, by a certain fatal necessity, involves every mortal within its wide-extending vortex, and mows down the tenth part of mankind. Hence he justly concludes, that in presenting the public with the fruits of his labours, which are calculated to avert this dreadful pestilence, he shall render an essential service to his country, and to the whole human race.

He observes, that two Italian physicians, Timoni and Pilarini, the first in the service of the Grand Seignior, and the second in that of the Czar of Muscovy, both eye-witness for many years to the constant success attending the practice of variolous inoculation among the Circassian women, adopted the practice, and announced it to the rest of Europe. Timoni's letter to Dr. Woodward was communicated to the Royal Society in 1713; and Pilarini's treatise

on the subject, entitled, *Nova et tuta Variolas excitandi per Transplantationem Methodus*, was published at Venice in the course of the same year. Five years after this period, Lady Mary Wortley Montague, whose son had been previously inoculated at Constantinople, where her husband was ambassador, set the first example of propagating this beneficial practice, by having her own daughter inoculated, on her return to England, by Mr. Maitland, an eminent surgeon in London.

We find, however, by the history of inoculation which Dr. Sacco has given, as well as that written by others, that when our ambassadress entered into a truce with that inveterate enemy of mankind, the small-pox, the faculty in general manifested a violent opposition, because their interests were not sufficiently consulted in the treaty.

Dr. Sacco informs his readers, that it is now four years, since the celebrated Jenner, who has devoted his life to the most philanthropic meditations, conceived an idea of inoculating with vaccine instead of variolous matter. In this undertaking he was guided by sound reason; having observed, as well as learned by tradition, that those who contracted the vaccine disease by milking, were perfectly secured from the small-pox.

"But this discovery," says our learned author, "so fortunate for the human race, shared the fate

of other grand and useful innovations; by encountering much opposition at its first outset. The basest envy let loose all its virulence against the discoverer, on his first appearance in London; but its attacks only caused him to redouble his diligence, in order to bring his discovery to perfection.—For a moment he retired from his enemies; to confound them, on his return, with the victorious arms of multiplied observations, and the most decisive experiments.—At a distance from the clamours of a populous city, in the retirements of Gloucestershire, he continued his observations in perfect tranquillity; and, after a vast number of experiments, was confirmed in his opinion, that immense advantage would be derived from the practice."

Our author observes, that from the example of Dr. Jenner, and the light which he had thrown on the subject, some of the most celebrated medical practitioners in England were induced to explore the merits of vaccine inoculation; and, after a long conflict, between prejudice on the one hand, and reason on the other, truth ultimately triumphed.

Dr. Sacco remarks, that notwithstanding the evidence of facts, and the common consent of the greatest nations to adopt vaccine inoculation, there were not wanting, either in Germany or France, opponents of the same description with those, that Jenner had to encounter in England; men who began to oppose the practice before they understood the success of

the experiments already made, and to decry vaccine inoculation before they had examined into its merits.

"But this sort of opposition was forced to give why to a vast number of experiments, not one of which was clouded with an unfavourable issue; and the enemies of the new practice were soon reduced to a silence fortunate for humanity.

" But," says this patriotic writer, " since, with us, inoculation of the small-pox has not hitherto met with the reception it deserves, and thus a free course has been left to the destructive influence of that disease; every good citizen must hope, that in the present happy period, he shall see vaccine inoculation adopted; a practice which has so many remarkable advantages over that now in use, and is destined to be the safeguard of human kind."

From a perfect conviction of this important truth, Dr. Sacco has undertaken his present work; in order to communicate to the members of government, and every class of his fellow citizens, an account of the numerous experiments made in this practice, by others as well as by himself, with the happiest success.—He declares, that he shall be content, if his labours should contribute to the advantage of his country; that he shall be well recompensed for all his fatigue, if what he has written proves worthy of the attention of those enlightened persons who are at the head of affairs; if it shall induce them to take those salutary

measures which are necessary, in order to render vaccine inoculation general throughout the whole republic.

Dr. Sacco has no small claim on the gratitude of his country: he has discovered the Cow-pox in Italy; he has discovered an indigenous preservative against the ravages of the most destructive pestilence; he has taught his countrymen, how to subdue their most formidable enemy without foreign aid.

He informs us, that the Cow-pox is a disease which the veterinary authors in Italy have either passed over in silence, or confounded with other diseases of the skin. Nevertheless, it seemed improbable to Dr. Sacco, that this malady was confined to cows in England. He therefore instituted a diligent enquiry, in order to ascertain this point; and, after many difficulties and disappointments, his labours were at length crowned with success.

The cows in the neighbourhood of Milan, are in general of the Swiss breed; and we are informed by Dr. Sacco, that the Cow-pox is no uncommon disease in Switzerland. He entertains a doubt, whether it can originate from equine matter in Italy, since the care of cows and that of horses are not consigned to the same persons. It is, however, difficult to prove, that the peasants never interfere in any occupation, out of their own department.

In England, the experiments of Dr. Loy having dispelled all doubt on this head, it is unnecessary to recapitulate the arguments urged by Dr. Sacco against Dr. Jenner's opinion. I have now before me a letter from Dr. Jenner, dated Cheltenham, Nov. 10, 1801, stating, that he had endeavoured to infect with the Cow-pox a man who had never had the small-pox, but who had, twenty-four years ago, contracted a pustulous disease on the hands from the heels of a horse. Dr. Jenner inoculated him three times in each arm with the most active virus; but in vain. Thirty other persons, inoculated with him, took the disorder.

By a diligent enquiry into the nature of the diseases which infest the cows in Lombardy, Dr. Sacco ascertained, that they are sometimes attacked with a pustulous disease, in a considerable degree resembling the genuine Cow-pox described by Dr. Jenner. In addition to the symptoms laid down by him, as attending the disorder, Dr. Sacco was informed of one which is remarkable; namely, a continual appearance of rumination, although the animal has no food in the mouth. According to the account of the herdsmen whom our author examined on this subject, the cow makes a motion with her lips, similar to that which a man makes when he plays on a pipe.

Sometimes a few pustules appear about the eyelids or nostrils; probably occasioned by contact with those on the nipples.

This disease commonly occurs in the spring or autumn. It was in this latter season that Dr. Sacco, having occasion to go to Varese, was first so fortunate to hear that the genuine Cow-pox was occasionally seen in Lombardy, as well as in Switzerland. A dealer in Grison cows also informed him, that in his country he had seen the animal afflicted with a similar eruption; the remedy employed for healing the sores and removing the incrustations, was boiled oil; that is, oil in which litharge is dissolved by decoction.

The cows in those parts, are also sometimes affected with the spurious Cow-pox; of which our author has given a description. The genuine, he says, is so contagious; that when one cow contracts the disease, the whole herd is infected.

Dr. Sacco was inclined to believe, that the genuine Cow-pox which is indigenous in Italy, is of a milder species than that found in England; but I am convinced by several circumstances, that this opinion is erroneous. The sore arms which he reads of in the early accounts of vaccine inoculation, when some practitioners inoculated by incision, are now scarcely heard of; unless in a very cold season, or when violence has been offered to the pustule. The inconvenience resulting from the first-mentioned cause, is not so likely to occur to Dr. Sacco, as to those who live under more inclement skies. It is however but

trivial, when proper caution is observed; and is not peculiar to the inoculation of the Cow-pox.

The complexion of the pustule is different, in Italy, from that of the pustule observed in the cow in these northern climes; it greatly resembles that which is excited by artificial means, in the human subject. A red spot first appears, which is succeeded by a tumour; and a lucid pustule, of a pale red. It is surrounded by a circle of the same colour; and has a brown spot in the centre, with a slight depression.

In order to determine whether this was the genuine Cow-pox, Dr. Sacco inoculated a considerable number of persons with the virus extracted from these pustules; and, both by the proofs and counterproofs, was fully convinced of its identity.

It has been remarked, in the course of this dissertation, that the greatest anatomists and physiologists of modern times, have been foiled in their attempts to infect brute animals with the small-pox; and have therefore concluded they were insusceptible of that distemper. To shew that such negative proofs ought always to be admitted with some reserve, I need only remind the reader, that many persons of acknowledged abilities also failed, in their endeavours to excite the Cow-pox by matter of grease; which, nevertheless, has been accomplished, and it is now become an established axiom in medical science.

According to the experiments of Citizen Bannier, a veterinary surgeon at Chartres in France, the result of which is published in the first volume of the Literary Genius of Europe, it appears, that sheep, oxen, and dogs, are susceptible of the small-pox. This is corroborated by two instances in the practice of Dr. Sacco; who having inoculated two dogs in the lips with variolous matter, three pustules were excited in the parts where the virus was inserted, in one of the animals; and one in their vicinity. In the other animal, one pustule was excited in the vicinity of the punctures.

Dr. Sacco subjected five other dogs, which had been previously vaccinated, to the test of variolous inoculation; but in vain. Hence he concludes, that in quadrupeds, as well as in the human species, vaccine inoculation is a preservative against the small-pox; and adduces the testimony of Citizen Bannier, in the Journal before mentioned, to confirm his opinion.

That domestic animals are susceptible of variolous infection, has by medical men, for some time past, been considered as a vulgar error. Nevertheless, when we recollect, what continual revolutions all medical theories undergo, we ought to be extremely cautious how we draw positive conclusions from negative results.

This reflection is partly suggested, by the follow-

ing circumstance. Having lately been informed, that a cat belonging to Mr. West, a green-grocer, of Adam-street, Rotherhithe, had caught the small-pox of a child who laboured under that distemper, I enquired into the truth of the report; and was assured by Mrs. West, it was well-founded.

From the time when the child sickened with the small-pox, which was of the confluent kind, the cat constantly continued under the bed; and at last, when much reduced in strength, and emaciated, she was dragged out from that place by Mrs. West; who attempted to force down some nourishment; but, on opening the mouth of the animal, she perceived an intolerable stench, exactly similar to that of the child who was covered with the small-pox. She afterwards examined the skin of the cat; and found two pustules, resembling those of the small-pox; but the smell was so offensive, that she was obliged to desist from any further research; and the animal was drowned, in order to release her from her misery.

The dogs that were infected with the small-pox by Dr. Sacco, shewed less inclination for food than usual; and appeared melancholy for some days. Two of those that had the vaccine disease, were dejected for one day, and lost their appetite; but had no pulmonary affection.

Our author observes, that in dogs, the vaccine pustule has no areola; and runs its course in a shorter

period of time than in the human species; but undergoes no degeneration in consequence of repeated transmissions, in the canine race.

Dr. Sacco met with some instances similar to those mentioned in a former part of this work; in which spurious pustules first appeared, and, after they had disappeared, genuine vaccine pustules succeeded; which ran their usual course. This shews, that we are not to consider a spurious pustule, as an absolute proof of the failure of vaccine inoculation.

Our author observes, as many others have done, that when the small-pox had taken previous possession of the habit, the violence of the disorder was considerably mitigated by the Cow-pox.

Dr. Sacco adverts to the opinion of Hufeland, already noticed in this treatise, that variolous matter taken before the pustule arrives at maturity, produces a spurious kind of small-pox. Our author himself is of opinion, that virus taken from a vaccine pustule at an early period may produce the spurious disease. This opinion is erroneous. The virus is never more active, or more certain in its effect, than when taken at the most early period possible; provided a sufficient quantity can be procured.

Two cases are quoted from a note in the French translation of Dr. Jenner's work, to prove, that lymph taken from a variolous pustule, at its first appearance,

excites a mild disease; but one which is not sufficient to shield the constitution against a future attack of the small-pox. This elucidates the point in question; and it is evident, that varicellous matter, used instead of variolous, has brought the variolous lymph, which is most esteemed by all experienced English inoculators, into unmerited disrepute, in some parts of the continent of Europe.

Dr. Sacco met with one case of the co-existence of Cow-pox and chicken-pox. This he calls a species of spurious small-pox; and remarks, as others have done, that it is this disorder which has so often imposed on inexperienced observers; and induced them to believe, that a person may have the small-pox more than once.

To this valuable publication are annexed, a plan for rendering vaccine inoculation general throughout the Cisalpine republic; and plates, representing the Cow-pox, both in the brute animal and the human subject. The whole work abounds with incontestible proofs in confirmation of Dr. Jenner's principal positions; that the Cow-pox is a disease void of danger, and that it is a certain security against the small-pox.

Dr. Sacco mentions some instances of an eruptive disease, which was so remarkably mild, that he was doubtful whether to consider it as the genuine or the spurious kind. By the latter is meant the chicken-pox; which has often been called by that name.

This is the more deserving of notice, because many persons have considered it as a peculiar disadvantage attending the Cow-pox, that it might be mistaken for a spurious distemper of the same denomination.

A singular hypothesis is advanced by Dr. Niedt, in an inaugural dissertation published at Halle in 1792, that the chicken-pox, which he also calls the spurious small-pox, arises from the degenerated matter of the small-pox.

This supposed metamorphosis of one disease into another, had been alluded to by a Dr. Bond, in a tract published at Nurenberg in 1787. He ascribed the phenomenon to some change which the variolous matter had undergone, either from heat or putrefaction. It is unnecessary to adduce arguments, to shew that this hypothesis is ill-founded; since it is well known to all experienced inoculators, that although heated matter may produce a spurious pustule, and putrid matter excite erysipelas, the chicken-pox is not the fruit of any such equivocal generation, but a specific disease.

A coincidence, similar to that which gave rise to this erroneous opinion, lately occurred in the family of Mr. Taylor, in Little Castle-street, Oxford-market. A child who had been inoculated for the Cow-pox by an eminent practitioner a year before, was put to the test of variolous inoculation, by a person not of the medical profession. A pustule was excited; such

as, it is well known, frequently takes place, when variolous matter is inserted into the arms of those, who have had either the Cow-pox or the small-pox.

The parents were alarmed, and had a younger child also inoculated with variolous matter; which took effect.

Mr. I'Anson having informed me of these cases, I went to the house, and, after proper examination of all circumstances, was not surprised that the first opinion of the parents was rather confirmed. An eruption had taken place, at the time when it was expected; but it was different from that which began to appear on the younger child. It was more of the vesicular kind; and one elevated vesicle, full of serum, was discovered on the breast.

A gentleman of great eminence, who saw this eruption, was inclined to think it the consequence of variolous inoculation; but I was well convinced of the contrary, for the reason already assigned, and also, because not a single pustulous eruption accompanied the pustule where the virus was inserted.

Upon making enquiry, it was found, that a schoolfellow of this child also had the chicken-pox; and the infant, after the cessation of the small-pox, having likewise the same affection, as I had predicted, every doubt in the minds of the parents was removed. It may be necessary to remark, that in each of the

three instances here mentioned, the eruption vanished in six days. This was, perhaps, the most fallacious case on record. It shews the danger of giving a hasty prognostic in eruptive distempers.

Another instance, in which the chicken-pox was mistaken for the small-pox, occurred in the case of a child of Mr. Silk, in Parker's-rents. Two or three medical gentlemen having suspected the disorder to be the small-pox, I was applied to, having inoculated the child with the Cow-pox a considerable time before.

The eruption was in some places vesicular; but in others pustulous, as is common in the chicken-pox; although this circumstance is not well understood by medical practitioners in general, or by the public.

A majority of the pustules remained unbroken; the mother having prevented the child from rubbing or scratching them, in order to decide with the greater certainty on the nature of the disease. And here it may not be superfluous to remark, that a greater degree of itching attends the chicken-pox, at the time of its eruption, than the small-pox; in which that symptom seldom commences in any considerable degree till suppuration has taken place. The consequence is, that in the chicken-pox, the pustules are commonly ruptured and obliterated by friction; whereas in the small-pox, they for the most part ar-

rive at suppuration, whatever may be their fate in future.

At the request of the parents, I inoculated another child, whom also I had inoculated with the Cow-pox; and produced in each arm a local vesicle, perfectly circular, and in some measure similar to a Cow-pock, but more transparent. No general eruption, nor evident constitutional affection ensued.

To prevent any misrepresentation from taking place, I requested Dr. Willan to examine the child in whom the eruption first appeared; whose opinion was expressed to me, in writing, in the following terms.—" The eruption on the child in Parker's-rents is the varicella: all the pustules which now remain visible having the precise characteristics of chicken-pox, and none of them the hard, inflamed, and extended base peculiar to the small-pox."

I am indebted to Mr. Ford for the detection of another mistake, in which an eruptive disorder was supposed to be the small-pox, by two gentlemen practising pharmacy. Mr. Ford, understanding that the child in whom this eruption occurred, had been inoculated with the Cow-pox by me, thought it only justice that I should be apprised of the circumstance whilst there was an opportunity of judging of the nature of the disease. He himself was decidedly of opinion, that it was not the small-pox.

Very little apology can be offered for the misconception which had prevailed in this instance. The eruption was copious; but so small, that exsiccation and desquamation had taken place in many parts of the body, although it was only the seventh day of the disease.—In this case also, I consulted Dr. Willan, as a security against any false reports which afterwards might be propagated. His written report is as follows.

"Dr. Willan can confirm the report already given, that Mr. Richards's child has not the smallpox. The complaint is not particularized in medical writers. In the proposed arrangement of cutaneous diseases, it stands under the title of impetigo sparsa; which consists of minute acuminated pustules, having a milky top, with but little inflammation at the base.—They come out on successive days for a week or two together; then dry and flatten."

I have now in my possession several documents tending to refute false reports of a similar kind. One is a letter from Dr. Jenner to Admiral Berkeley, Chairman of the Committee of the House of Commons appointed to enquire into the merits of Dr. Jenner's petition. This relates to the children of a gentleman in Portman-square, whose arms Dr. Jenner had examined, at the request of their mother. He had declared one of them totally insecure; the other not perfectly satisfactory. He desired therefore, that both of them might be carefully guarded

from the infection of the small-pox, till they were again inoculated. This advice was complied with. The result of variolous inoculation in these children is variously reported. Some say, infection took place in one; others, that it took place in both; but, as the credit of vaccine inoculation is vindicated, I have not thought it worth while to make farther enquiry.

Another unfavourable report was circulated, relative to a child of a gentleman in Devonshire-place, who had been inoculated with the Cow-pox, and was afterwards subjected to the test of inoculation with variolous matter.

I have now before me a letter from the father of the child to Dr. Jenner; in which he affirms, that so far from justifying such a rumour, the facts decidedly proved the efficacy of vaccine inoculation. The arm inflamed and festered, so as to make the child uneasy; but no pustulous eruption was produced. The report arose from the appearance of two or three pimples, which never came to any head, nor bore any resemblance to the small-pox. These did not appear till the day after the surgeon had taken his leave, satisfied that there was no probability of the child's having the small-pox.

It was stated to me by a physician, that fever attended this case; which he understood to be a certain indication of a constitutional disease. This is true; but

other proof is necessary, to shew that this constitutional disease is the small-pox.—It may proceed from dentition, or from a common cold; or even from the irritation of the local pustule, as in the case of Mrs. Fraise, which is related in the 329th page of this treatise.

A number of similar cases have been communicated to me; of which I shall select one, for which I am indebted to Mr. Astley Cooper. Mr. Beaumont, surgeon, of Gravesend, when a pupil of Mr. Cooper, dissected a small-pox subject in company with a pupil of Mr. Whitefield. The consequence was, that both these gentlemen had pustules, first on their fingers, and afterwards on various parts of the body. Even that part of the scalp which is covered with hair did not escape. The general eruption was preceded by, and accompanied with fever.

I am now about to notice a report, which, however erroneous, derived no small importance from the respectability of the channels by which it was circulated. The report was, that two young gentlemen, students at Oxford, who had been inoculated with the Cow-pox by Dr. Jenner, and pronounced safe by him, had since had the small-pox, to which one of them had fallen a victim.

This rumour crossed the waves of the wide Atlantic ocean; and created great anxiety in the minds of those parents, whose children had undergone vac-

cine inoculation. An account of these supposed failures having been transmitted to a gentleman in Boston, by Mr. Erving, the American Consul, Dr. Waterhouse wrote to me, and requested that I would enquire into the particulars of this narrative.

Though perfectly convinced that this rumour was totally destitute of foundation, I judged it necessary that it should be contradicted, on authority equally respectable with that on which it was propagated. I therefore wrote to Dr. Wall, of Oxford, asking the favour of him to investigate the subject.

Mr. Erving, the Consul, had heard the report from his father; who probably misunderstood a conversation which took place in a bookseller's shop when he was present.

I here insert Professor Wall's letter, which furnishes an additional proof, that the new practice has nothing to fear from the most rigid investigation.

Copy of a letter from Dr. Wall, *of Oxford, dated April 13th*, 1802.

"DEAR SIR,

"The report which you mention in your letter is certainly very erroneous; but is probably built upon the history of the cases of the children which were inoculated by Mr. Grosvenor's assistant, Mr. Swift. We have no Dr. Smith, head of Trinity college in this university;—nor have we had any student die

of the small-pox, after having been inoculated for the Cow-pox; nor did Dr. Jenner inoculate those children whose cases have been so much discussed and canvassed here and elsewhere, and lately before the Committee of the House of Commons.—Dr. Smith, master of Pembroke college, was probably the gentleman, whose conversation Mr. Erving overheard at Mr. Wright's shop; but he could not have stated the matter as has been represented.—He is at present from home, but I will shew him your letter as soon as he returns.

"With respect to the cases of those children, you and the gentlemen of the committee have had my opinion fully. I do not believe they ever had the genuine Cow-pox; and I am induced to adopt this opinion, expressly from the circumstance that they had *both of them* the small-pox, after they had been inoculated with vaccine matter, and had been supposed to have had the vaccine disease. So many thousand cases have concurred, to prove the efficacy of the vaccine inoculation in preventing the variola, that in any instance, where an exception appears to a law so generally established, I am always disposed to conceive there has been some mistake or inaccurate observation. In many instances we have been able to trace the error, and detect the fallacy. One occurred in this place, to Dr. Jenner and myself. I conducted him last summer to a house, where one of three children, and *one only*, whom his nephew had inoculated nearly a year before with vaccine matter,

had then the small-pox out upon him. Dr. Jenner, upon examining the child, particularly the arm in which the vaccine incision had been made, and then looking round the room, said to the mother, "Don't you recollect my being here soon after "these children were inoculated, and that, looking "upon this child's arm, I told you, the child had not "had the real infection, and would not by that in- "oculation be prevented having the small-pox, if it "should be in the neighbourhood?" He told me also, that he examined at the same time the other children's arms, and pronounced them safe. Why the woman did not have the child re-inoculated as Dr. Jenner advised, I do not remember.—In many other similar instances (and many such have occurred, and will occur, from the hasty inattentive mode in which the inoculation was performed by ill judging and careless persons) the fallacy has been detected. In some, from distance of time, and other circumstances, it has been impossible to develope the mistake with equal satisfaction. But if it has been demonstrated in ten thousand instances, that the vaccine inoculation will prevent the small-pox, what force, in opposition to such a general law, can ten, twenty or even an hundred exceptions have, especially where it can be shewn, that many of these exceptions have been cleared up, and have ultimately afforded convincing proof of the general truth?

"Where positive demonstration cannot be adduced, analogy may be called in to our aid. The history

of the inoculated small-pox will afford us much assistance. A gentleman of this neighbourhood inoculated the inhabitants of two or three villages, as he thought, with variolous matter; in consequence of which, an eruptive fever and a mild form of disorder, resembling small-pox, came on at the usual time. But after these people had been well some months, one half of them, nearly, took the small pox by contagion; and some had it very unfavourably. About the same time, a gentleman of eminence in the profession, residing in Kent, published, I think in the 4th volume of the Memoirs of the Medical Society of London, (I have unfortunately mislaid that volume, so that I write from memory) with great candour, an account of a similar failure in variolous inoculation under his care.—Now, let me ask, do these cases, and many more of the same kind, excite in any one's mind the smallest doubt, whether the artificial introduction of variolous matter into the human body is a certain preventive of any subsequent influence of that matter on the same person, either naturally or by inoculation? Is it not immediately concluded, that there must have been some error in the conduct of the inoculation, and that those persons who are supposed to have had the small pox a *second* time certainly had in the *first* instance some other fallacious eruption, and not the genuine variola? In the case of the vaccine disease, we ought to reason in the same way.

" With respect to the three exceptions, which have

occurred here, they have never shaken my faith in the truth of the general law; which I think has been as demonstrably proved as any proposition in natural philosophy or geometry: and I have no doubt but the time will come, when the medical world will express its wonder, that so many difficulties should have been raised upon such slight foundations, to prevent the progress of a discovery so highly advantageous to mankind, and so honourable to the discoverer.

"I am much concerned that the account of any of these apparent exceptions to the general law, of which I have been speaking, has been transmitted in so improper a form to America. I have no doubt you will do every thing in your power, to rectify the opinion of Dr. Waterhouse on this important subject. I have not the happiness of knowing him, either personally or by correspondence; but every body knows him from his zeal to promote medical science; and useful discoveries, in every department of it. His opinion will of course be looked up to, as a guiding star, for the direction of others throughout the United States; and therefore the most exact account of every fact relative to the subject, should be transmitted to him. My remarks, such as they are, are very much at your service; to be employed in any way you please, if they can be made subservient to the cause of truth.

"I remain, &c.

"M. Wall."

When I waited on Mr. Erving, he informed me, that having from the first interested himself in the question of vaccine inoculation, he had not only conversed on the subject as often as opportunity offered, but perused several publications on the subject; and the result of his reading had induced him to be of the sceptical side. Apprehending that injurious consequences would flow from the new practice, he had conceived it his duty to warn his friends of their danger. His note, which I subjoin, and the letter which he sent to Dr. Waterhouse, reflect the highest honour on their author; and must excite a blush, if any thing can excite a blush, in those who confess, that although the practice of vaccine inoculation, on which so great a portion of human happiness depends, has been promulgated for years, *they have never troubled their heads about it.*

Copy of a note from Mr. Erving, dated April 18, 1802.

" Mr. Erving presents his compliments to Mr. Ring; and is much obliged for the perusal of Dr. Wall's letter, which he herewith returns. He also returns, with many thanks, Mr. R.'s ingenious Treatise on the Cow-pox; which has afforded him great pleasure and instruction.

" The vaccine inoculation is so new and important a discovery, that it has excited the attention of all who feel themselves interested in the welfare and happiness of their fellow men. Mr. E. partaking in

this general interest, has been induced to read, and make enquiries on the subject; and the opinions he has formed therefrom, have thrown him rather on the sceptical side, as to its permanent effects, in totally discharging the habit from all future susceptibility of the variolous infection. He now confesses himself an entire convert to the new doctrine; to which the multitudinous cases recorded by Mr. Ring, have greatly contributed; and his only fears now are, that the practice being so very simple, and the operation and effects of the disease so innocent, it may descend into the hands of the ignorant, careless, and unwary; so as to defeat all the promised good effects, and leave the patient, by throwing him into a false state of security, in a more perilous situation from the variolous infection than he was at first."

The following is an extract of the former letter, alluded to by Dr. Wall.

"Oxford, March 29, 1802.

"SIR,

"I ought long ago to have thanked you for your obliging present of the first part of your Treatise on the Cow-pox; but a great variety of engagements prevented me.

"I have been extremely pleased with the perusal of your impartial history of this invaluable discovery; and your firm and manly defence of it against calumny and detraction.—I hope the general voice

of the nation, speaking in Parliament, will give its sanction to the merits of our excellent friend Dr. Jenner, by remunerating in the best way it can, for it can never render an adequate compensation, the eminent services which he has conferred upon the state.

" From the day when I first received intimation of Dr. Jenner's discovery, of the effect of inoculating the vaccine, to the present hour, I have never once varied in my opinion; though cases, exciting scepticism in some gentlemen, have occurred in this neighbourhood.—Many of them have been explained; and the others might, I have no doubt, had it been possible to develope the whole progress of the several cases.

" Many years ago I learnt in, or by my connexions in, Gloucestershire, that those who have had the casual Cow-pox could never have the small-pox.—The fact, however singular, lay treasured up in my mind; and when Dr. Jenner's discovery came to my knowledge, it met a mind prepared, and ready to receive this extraordinary communication; which to most people appeared a dream, or an invention of fancy.

" Accept, Sir, my thanks for the exertions you have made in this great cause; and, though I have not the pleasure of your personal acquaintance, assure yourself, that I feel every sentiment of regard

for a gentleman, who has proved himself so eminently the promoter of medical science, directed to its best end, the preservation of the lives of millions.

" I am, SIR,

" respectfully and truly, yours,

" MARTIN WALL."

Dr. Waterhouse, after stating the unfavourable report which had reached Boston, says, " Vaccination has had much to contend with here; but its enemies are lessening daily. It will triumph in spite of its opponents. President Jefferson is the greatest patron of it in America. Under his auspices I have planted it in Virginia, Kentucky, Columbia, the city of Washington, and Philadelphia.

" The President speaks of it to me as the most valuable discovery in the annals of medicine; and set the example of the practice in his own family. He wrote me word a few months ago, that he had at that time upwards of twenty of his family under the distemper.

" President Jefferson has condescended to diffuse the virus through the extensive and populous state of Virginia; and has caused my letter to him to be printed, as it contained the rules for vaccination."

By a letter received from Dr. Coxe, of Philadelphia, I am informed, that the first vaccine virus

which I sent him failed; the second succeeded.—Before the latter portion arrived, he had received an infected thread from the President, which proved successful; and is the source of the matter which Dr. Coxe has diffused through several of the neighbouring states.

We are informed, by a letter published by Dr. Waterhouse, dated Cambridge, Nov. 3d, 1801, that three hospitals were at that time established, or establishing, in America; one at Rochester, another at Franklin, and another at Westford. These were intended principally, for putting those patients who had undergone vaccine inoculation to the test of inoculation with variolous matter.

In another letter, dated Dec. 9th, 1801, Dr. Waterhouse remarks, that benefits and blessings are valuable according to their duration and extent. Some, as wise laws, good governments, and virtuous magistrates, are, like the showers of heaven, blessings for a season; but that benign remedy vaccination, which will save forty millions of lives every century, and "strike one out of the catalogue of human evils," is, like the blessing of the sun, universal and everlasting.

"The sagacious ancients," he observes, "invariably made this distinction between the value of local and temporary blessings, and such as were permanent and universal. Thus they decreed only heroic honours to founders of states, lawgivers, exterminators

of tyrants, and fathers of the people; but divine honours to the inventors of new arts, and authors of new discoveries, for the benefit of the whole human race; as is beautifully exemplified in the splendid allegory of Ceres, and of Apollo; one giving food to mankind, the other health.

"On the first perusal of Jenner's treatise, I was struck with the unspeakable advantage that might accrue to this country, and indeed to the human race at large, by his discovery; and have invariably held it up in that point of view to the public."

Dr. Waterhouse observes, that although Spanish America has, English America has not experienced the devastation of the small-pox in its full extent. He adds, "When America shall contain cities as large, and as numerous as those of Europe, that loathsome disease will reign and triumph here, with all its characteristic fatality and horror; unless banished by the general adoption of its recently discovered substitute."

At the conclusion of his letter, Dr. Waterhouse informs us, that he intends to publish a report of the success of the new inoculation, since his fresh importation of matter from England; by which it will appear, that from the middle of March to the date of his letter, he had not had six spurious cases when the vaccine fluid was immediately transferred from arm to arm; and but very few when he used the

thread, unless in the month of July, when the matter was injured by the extreme heat.

It must give great concern to every friend of this beneficial practice, to learn from Dr. Waterhouse's letter, that only one medical man in New England prosecutes vaccine inoculation with so much ardour, as to keep up a constant succession of patients, and preserve the Vestal flame.

There are, we know, persons who pretend, that the violence of the small-pox may be so much assuaged by art, as to render any innovation unnecessary.—Let them peruse the account of the proceedings of the society for the propagation of the gospel. They will there find, that in the course of a year, one clergyman at Halifax had buried ninety-one persons, who had died of the small-pox; twenty-one of whom had died of inoculation.—Let our other Transatlantic brethren, who are still deluded by false representations, and fond hopes of security from inoculation of the small-pox, read this narrative of the ravages it still commits on their own shores, even when it appears in its mildest form: let them read this narrative, and tremble.

A letter from Dr. Coxe, dated Nov. 24th, 1801, announcing, that with matter received from Mr. Jefferson, he had succeeded in establishing vaccine inoculation at Philadelphia, was published in the American Daily Advertiser. By the same vehicle Dr. Coxe

afterwards published another letter, dated Dec. 15th, 1801, wherein he states, that he had inoculated several patients with vaccine matter, with the happiest success. He afterwards submitted them to variolous contagion, both in the form of inoculation, and in the natural way; which they resisted.

He inoculated one child with the Cow-pox, on whose mother the small-pox broke out the next day. The child was with her mother during the disease. On the eighth day from the insertion of vaccine matter, Dr. Coxe inoculated her in three places with variolous matter from her mother. The consequence was, only three small pustules, unaccompanied by any general affection of the system. Three weeks had elapsed, since the child had been exposed to the natural infection; yet she had perfectly escaped.

Dr. Coxe expresses a confidence, that the practice will soon spread far and wide; which his own conduct, and his own example of inoculating the poor gratuitously, and distributing vaccine matter amongst medical practitioners, will tend greatly to promote.

He observes, that his own experience serves to augment the vast collection of facts, on the important point, of the Cow-pox proving a sure preventive of the small-pox; and to establish the certainty, that a change of climate does not affect its beneficial influence.

He sincerely congratulates his fellow citizens on the introduction of this invaluable blessing amongst them. He is confident it requires but to be known, in order to ensure its speedy diffusion in every part of the world. He concludes with asserting, that millions yet unborn will have cause to bless the immortal name of Jenner.

He observes, that the vast advantages of this practice begin to be duly appreciated. He anticipates its final triumph over the small-pox, in Philadelphia, in the short space of a few months: after which, he firmly trusts, this ferocious destroyer of the human race will be known only by name.

A letter received from Dr. Coxe, by his father, a gentleman of great respectability residing in London, states, that after inoculating his own child with the Cow-pox, he has several times inoculated him with small-pox matter; but to no purpose.

To the youthful ardour of Dr. Coxe, and to his unwearied exertions, Philadelphia is beholden for the establishment of this beneficial practice; but we have reason to hope, that his laudable endeavours will be seconded by the most experienced practitioners of that city.

Dr. Rush, in a letter to Dr. Lettsome, dated March 15th, 1802, says, "Your publication upon vaccination has contributed very much to spread the

knowledge of that invaluable discovery through the united states. We have adopted it in Philadelphia; and with universal success. The difficulty of obtaining vaccine matter is the only circumstance which has prevented its being adopted in every part of our country. This difficuly is lessening daily. The practice, in a year or two, I have no doubt, will be universal."

Dr. Redman, the venerable father of physic in the college of Philadelphia, ardently embraces the new operation. Under such auspices, vaccine inoculation must increase and prosper.

Dr. Waterhouse informs Dr. Jenner, that Dr. Rush is now become a zealous advocate for the new practice; and has sent him an eloquent lecture on the blessings of the Jennerian discovery.

Dr. Waterhouse also communicates the pleasing intelligence, that vaccine inoculation is now extending its salutiferous powers to the wilderness of the new world. In the month of December last, a grand embassy of certain tribes of the Indians came to the city of Washington, while the congress was sitting. The government of the United States continues to do every thing in its power to promote the comfort, happiness, and civilization of those people; and to ameliorate their condition.

Washington and Adams had already supplied them

with the plough and the loom; causing them to be instructed in agriculture, manufactures, and commerce. It was reserved for Jefferson, to supply them with a prophylactic against the small-pox, which commits such dreadful ravages among their tribes; and to instruct them in the divine art of vaccination.

> Sollicitant alii remis freta cæca, ruuntque
> In ferrum; penetrant aulas et limina regum:
> Hic petit excidiis urbem, miserosque penates,
> Ut gemmâ bibat, et Sarrano indormiat ostro.

Were an ancient Roman now living, he would exclaim,

> Salve magna parens frugum, Columbia tellus,
> Magna virum!——

He would thank the immortal gods, who had sent such delegates;—viceroys endowed with such exalted virtue,—

> "Friends of the world, and fathers of mankind!"

Such men will civilize, not exterminate, barbarous nations. They will not turn the fruitful land into a desart; but the desart into a fruitful land.

By a letter of Professor Waterhouse to Dr. Lettsome, published in the European Magazine, for February 1802, we are informed, that not only the head warrior and his train had been inoculated at Washington; but fifteen other Indian warriors had since come down to that city, to receive the same

blessing from the hands of the chaplain to Congress, who had inoculated their countrymen.

I have also the satisfaction of learning through other channels, that the example of publishing testimonials in favour of vaccine inoculation, signed by such medical men as approve of the practice, which I proposed in this metropolis, has been followed in several parts of America.

Eighteen practitioners at Hereford, Ledbury, Ross, and Keinton, in an address recommendatory of the general substitution of the vaccine process for the small-pock inoculation, say, "We are most fully convinced of the efficacy of the Cow-pock, as affording a perfect security against the small-pox; and that it also possesses the following advantages.

"It may be communicated with safety at all periods of life, from infancy to old age; and with equal success, at all periods of the year; in different states of health, and during pregnancy.—It is peculiarly mild during infancy, the most dangerous time for the inoculation of the small-pox.

"It is not infectious by effluvia; and can only be communicated by inoculation.—None of the distressing changes so frequently produced in the constitution by the small-pox, have been known to follow the Cow-pock; and, there is good reason to suppose, they never will.

"Neither preparation nor confinement is required; —advantages peculiarly great to the lower orders of society; who may follow their usual occupations during the whole course of the disease."

This testimonial is a masterpiece. It is concise, yet comprehensive; and expresses the sum of all that has been said, or can be said, concerning the utility of the practice, with equal perspicuity and precision. The London testimonial is defective; not enumerating all the advantages which the new inoculation possesses over the old; but it contains every point on which the advocates of the new practice were agreed, at the time when that declaration was drawn up.

Intelligence has also been received from America, that fourteen medical gentlemen at Shrewsbury and its neighbourhood, have, from their own experience, certified their entire conviction of the success of the new practice; as an absolute security against the casual and inoculated small-pox.

When the Congress of the United States, with their illustrious president at their head, imparted this divine antidote to their uncivilized neighbours, the semblance of a religious ceremony might, perhaps, have been dispensed with; for even the untutored mind of an Indian could not have rejected such a boon; nor have doubted that it was the gift of heaven.—Besides, Little Turtle, the great warrior, might be suspected by his countrymen, to have received

priest's orders from the chaplain of the Congress who inoculated him; and be declared, for ever incapable of sitting in the parliament of the Creeks and Cherokees.

My friend, Mr. Blair, having suggested, that he had a favourable opportunity of transmitting such part of my treatise as was printed off, to his correspondent Dr. Mitchill, the celebrated professor, of New York, editor of the Medical Repository and Review, published in that city; I accepted his polite offer. While I was transcribing Dr. Waterhouse's just encomiums on Dr. Jenner, which are copied in a preceding page, I was honoured with the following communication.

"*New York, June 6th*, 1802.

"SIR,

"I have the pleasure to acknowledge the receipt of your elaborate and valuable history of the vaccine distemper.—It came to me safe, and in good season; and I ought to have returned you my thanks for it long ago.

"For some time I omitted answering your letter, through that sort of neglect, which postpones from day to day, business which does not demand instant dispatch: and, since the beginning of December last, I have been so engaged in attending to my duties as a member of Congress, at the city of Washington, that it was almost out of my power to write to you, or any body else, on the other side of the Atlantic.

" Our parliamentary session is now over; and I find myself, after almost six months absence, quietly seated at home again.

" I was pleased to find, that you had entered into a complete history of vaccination.—This discovery of Jenner is a most important event; and will ensure to him all the immortality that can be obtained here on earth.

" The first attempts to introduce vaccine inoculation in New York, were extremely discouraging; in consequence of the reception of spurious, instead of genuine matter.—The small-pox having always been tolerated, and never restrained by laws, in New York, the inhabitants did not feel much terror from a disease, to which they had always been accustomed; and, at first, betrayed more than common indifference on receiving the substitute. By degrees, however, their indifference and their scruples have been overcome; and a vaccine institution has been established, for perpetuating the supply of virus, and extending its benefits far and wide.

" I am induced to believe, that your book was instrumental in preparing the minds of our citizens for this establishment: for I soon made it known; and it was borrowed by one of the leading gentlemen in that excellent institution. I have lately had an application for your book, from Cambridge College in Massachusetts; and, when an opportunity offers, I

shall send it to one of my correspondents in that part of America.

" The virus has been discovered, in several places, on the teats of our American cows.—Several persons of observation are tracing its origin, propagation, and phenomena. The idea prevalent among them now is, that the matter of grease is not the cause of this disorder.

" Our periodical work, the Medical Repository and Review, goes regularly on. Materials flow in so fast, that almost every page is original.

The collection of facts concerning the yellowfe - ver, and pestilential distempers in general, is increasing very fast; and enabling us to form correct notions of those matters.

" The experiments and discussions concerning phlogiston, &c. which it contains, are in various respects repugnant to the doctrines and dogmas of the French school.

" I have the satisfaction of hoping this will find you well; and of assuring you of my respect and regard.

" Samuel Mitchill."

When I presume to suggest, that it was unnecessary for the chaplain of Congress to inoculate the Indian

warrior and his train, let it not be supposed, that I deem it derogatory to clergymen, to practice any branch of the healing art. On the contrary, they never appear to me to lessen the dignity, or tarnish the lustre of their sacred function, when they go about doing good.

The labours of the Rev. Mr. Joseph Berington in this vineyard, I have already mentioned, with that applause which they so justly merit. Since that period, I received from him the following letter, which is too interesting to be omitted here.

"SIR,

"FROM my general knowledge of your character, and understanding from Dr. Jenner, that you have paid particular attention to the progress of vaccine inoculation, I make no apology for the present letter.

"You must have seen, in the Medical Journal of August last, a paper written by Mr. Stevenson, wherein a very detailed account is given, of two children vaccinated by him; who afterwards took the small-pox by inoculation.

"Of this communication, which appears to be highly important, no notice has hitherto been taken; whence persons who are not friendly to the vaccine practice, have been strengthened in their opposition.

" Copies of Mr. Stevenson's paper have been industriously circulated; and some alarm has been excited. Particularly, a lady whose children were inoculated in London, is rather uneasy in consequence of this report; and requests me to apply to you for some information on this subject.

" I am aware it will be said, even admitting the two cases to have been as they are stated, it should weigh as nothing against the mass of evidence in favour of the practice. But is this mass really so great as it is presumed to be, unless it could be shewn, which evidently it cannot, that all, or the greater part, of those who have been inoculated in the different parts of the world, have also been exposed to the variolous infection?

" Are we sure, will Mr. Stevenson say, had they been so exposed, that some of them would not have been infected, as his patients were?

" Repeated trials, it is true, have been most successfully made: still a very few cases obviously tend to diminish the security of the practice; while they make a great impression on minds not conversant in the calculation of chances. I am therefore anxious that this case should be as scrupulously investigated, as many others have been; all of which, it is said, were found to have been mistaken or mistated.

" As I am on the subject, give me leave to add,

that, in my opinion, a very simple process has been perplexed, by the introduction of the word spurious. The Cow-pox is as much a distinct disorder as the small-pox; unless it be the same disorder in a mild state of modification; but we hear of no spurious small-pox; though there are eruptions on the body which bear a great resemblance to it in their appearance.

"To these eruptions proper names have been given: and in like manner, analogous names ought to be given to all eruptions, which resemble the Cow-pox in whatever way produced. Those who are acquainted with the real character of the disorder in its progressive stages, cannot easily be misled; and, where the smallest doubt arises, recourse ought to be had to a second inoculation.

"It is calculated, that in this kingdom, 45,000 persons annually die of the small-pox.—If so many lives can be annually saved by a general inoculation of the Cow-pox, surely it is not too much to hope, that our legislature will be induced to make it a national object.

"Obvious plans present themselves to every mind; such as the establishment of a board of medical men in London, whose office it shall be, to communicate with all the parishes in the kingdom; to transmit instructions and vaccine matter; and to receive regular reports and returns.

"May I be permitted to say, that I should rather be disposed to entrust the practical part to the clergy in each parish, than to medical men.—It is experience and observation alone, and not the most consummate medical science, that can give knowledge of the Cow-pox; and enable any person to conduct that operation with safety.

"A clergyman residing on the spot, when instructed in the character and management of the disorder, might practise it with success. Being less liable to be perplexed by the nature of his other avocations, than a medical man, this beneficial practice might command a great share of his attention; and, as he would perform the operation gratis, the people would be induced more readily to apply.

"The state of vaccine inoculation in the parish of Buckland, where I reside, is this. In the course of the last autumn, having received proper instructions from Dr. Jenner, I inoculated about 450 persons, of all ages; and I am now employed with the children who have since come into the world, with some few who were neglected or overlooked; and in reinoculating all those, in whose cases any thing dubious appeared.

"I am, Sir,

"With great respect, &c.

Buckland, near Faringdon, Berks.

"JOSEPH BERINGTON."

This communication, it would have been injustice

to the public to suppress. It furnishes many useful hints; of which they may avail themselves, when they are sufficiently sensible of their own interest.

Mr. Berington is mistaken in his opinion, that we hear nothing of a spurious small-pox. I have already given an account of a supposed metamorphosis of the genuine into the spurious small-pox, as described in the writings of Bond and Niedt; and of the bastard small-pox, as mentioned in the works of Monro and others. Under these denominations the chicken-pox is implied.

When, in consequence of a blunt lancet, effete matter, or any other cause, an inefficient pustule succeeds variolous inoculation, it is called a spurious pustule. In this respect also, the inoculation of the small-pox preserves a close analogy with that of the Cow-pox.

Bond, who imagined that the genuine variolous matter, when exposed to heat, produced a disorder specifically different, informs us, that eight persons were inoculated with small-pox matter at Philadelphia; and, as the virus was to be carried twelve miles, it was previously well dried. Five of these persons, he tells us, were in consequence attacked with the spurious small-pox: in the remainder, the operation proved abortive.

Niedt observes, that many persons who were in-

oculated with variolous matter, had the spurious instead of the genuine distemper; and afterwards, when exposed to variolous infection, caught the disorder. This happening to the most celebrated and the most experienced physicians, and the report of these unfortunate cases being soon circulated, it excited a number of enemies to inoculation; who contended, that it was unable to protect the patient against a relapse of the small-pox. This was the case at Berlin in particular; insomuch that almost all the practitioners of Berlin were the opponents of inoculation. Baglies enquired into the truth of the different reports, of the small pox occurring a second time; and found them all destitute of foundation.

Dr. Niedt affirms that "it is extremely difficult, in many cases, to distinguish one species of eruption from another; and particularly, to distinguish the genuine small-pox from the spurious. We ought therefore, to observe the places where the virus is inserted, with the utmost attention; and, where a perfect local pustule does not appear, to give a guarded prognostic, and reinoculate the patient."

The same learned and ingenious author takes notice, that the strenuous advocates of inoculation, have not practised it with sufficient care and attention; but represented it as so easy, that it may be safely undertaken by any person, whether conversant in medicine or not. Hence it has come to pass, that a number of ill consequences, occasioned by the

negligence or ignorance of the practitioner, were imputed to the practice.

"All the cases which I have adduced," says Dr. Niedt, "evince, that inoculation is not a matter of such trivial importance; since the most experienced and celebrated physicians, have committed mistakes in that line of practice. The privilege of inoculating ought, therefore, to be altogether limited.

When Mr. Berington has perused the history of vaccine inoculation, and seen what a multitude of errors have been committed in conducting that process also, he may not, perhaps, deem it quite so simple.

How far the term, spurious pustule, had been particularly applied to the fallacious local appearance, on the arm of a person inoculated, previous to the discovery and publication of Dr. Jenner, I shall not presume to determine. One thing, however, I may be permitted to assert, which is, that if we are indebted to Dr. Jenner for this discrimination, we are indebted for the elucidation of this, as well as many other obscure points, to him, whose constant maxim it has been,

Non fumum ex fulgore, sed ex fumo dare lucem.

In page 820 of this treatise, I have noticed Mr. Stevenson's letter, published in the Medical Jour-

nal.—To this letter, the following, inserted in the same respectable channel of medical intelligence, may, perhaps, be considered as a sufficient answer.

To the Editors of the Medical and Physical Journal.

"GENTLEMEN,

"In your Journal for October is an article, stating, that the Cow-pox appeared in the sixth century, proving extremely fatal; and that the small-pox in the human subject originated from this source. These errors are so palpable, that I should not have expected much mischief to flow from them, had they not been copied into another publication, which may give them the greater sanction. It is certain, that the disease to which the Bishop of Lausanne alludes, is the murrain; and it is equally certain, that the cow can neither receive, nor communicate, the small-pox.

"The report, that vaccine inoculation had succeeded in Russia, proves to have been premature; we have, however, great reason to believe, success in that quarter will not long be wanting.

"I lately received a letter from a gentleman in the county of Berks; in which he asks, Whether the mass of evidence in favour of vaccine inoculation, is so great as it is presumed to be? This query was occasioned by some *pretended* failures; for it is not likely, that two or more instances of real failures should happen at one time, and in the practice of one professional man; when so many other indi-

viduals have inoculated from a hundred to a thousand each, all of whom have resisted every form of the variolous infection, to which they have been exposed.

" Exclusive of other fallacious appearances, which have given rise to mistakes in the practice of the new inoculation, such as anomalous pustules, there is another fertile source of error. The chicken-pox is frequently mistaken for the small-pox. Several instances of this kind, have fallen under my own observation within a short time. Hence, persons who had undergone vaccine inoculation, have been supposed to have the small-pox in the natural way; when the disease was the chicken-pox; and this latter has in many cases been inserted by way of inoculation, instead of the small-pox.

" While unfavourable cases are circulated with great industry, by professed enemies of vaccine inoculation, or its *pretended friends*, it appears to me, that the real friends of the practice, lulled into a state of false security, are become rather remiss; and, being convinced themselves, imagine that the public are equally convinced. Hence they leave the field to their more active opponents; who improve this favourable occasion to their own advantage.

" The mildness of the Cow-pox is now undeniable; but, in regard to its efficacy as a preventive, there is a doubt remaining in the minds of many

persons, not much experienced in the practice, which challenges farther investigation. I consider it, therefore, as a duty to the public, to the cause of truth, and to Dr. Jenner, to declare, that having inoculated with vaccine virus as many as my other avocations would permit; and having particularly sought for patients in those places, where the small-pox raged; I have never yet been able to discover a single instance, where any one who had undergone vaccine inoculation, proved susceptible of the infection of the small-pox.

" These proceedings have been watched with a jealous eye, by persons not interested in concealing any real or apparent failure; whose silence, after the most severe scrutiny, is a stronger argument in favour of the new practice, than any attestation of mine. I have now inoculated above eleven hundred, who have gone through the vaccine affection in a regular way; and, after convincing myself of the certainty of this preventive, by repeated inoculations with variolous matter, left the task of putting the remaining part of my patients to the test of variolous contagion in the natural way, to their parents; and their compliance with my request has been so general, that, independent of accidental and unavoidable exposure, I have reason to believe, at least nine out of ten have been voluntarily subjected to that test.

" It necessarily follows, from these observations, that the preventive employed by some practitioners

is less efficacious; or the test to which their patients are afterwards submitted, more powerful. In order to decide this question, if any gentleman who has infected two, ten, or twenty of his own vaccine patients with variolous matter, will take the trouble of inoculating mine with the same, I will furnish him with at least a thousand, on whom he may exercise his skill. This offer, the opponents of vaccine inoculation, and its *pretended friends*, ought to accept; or, in decency, to be silent.

"One remark more is loudly called for. Your Journal, as well as other vehicles of intelligence on the continent of Europe, having stated, that inflammations of the arm had continued obstinate *in spite* of warm fomentations, I beg leave to express my humble opinion, that they continued obstinate *in consequence* of those warm fomentations; and I hope I shall be excused for expressing also my surprise, that, in an age when the means of information are so accessible, and when medical science is so far improved, one of its most incontrovertible axioms, that heat acts as a stimulus, and aggravates inflammation, can be so totally forgotten.

"I am, &c.

"New-street, Hanover-square, Nov. 17, 1801." "JOHN RING.

The next article in the same Journal confirms the parallel between vaccine and variolous inoculation, as far as regards the spurious pustule.

To the Editors of the Medical and Physical Journal.

"GENTLEMEN,

"As the following fact tends to corroborate a position advanced by Dr. Jenner, namely, that the variolous as well as vaccine virus, after the pustules are in a declining state, often parts with its specific properties, yet contains the power of exciting disease; I trust you will give it a place in your valuable publication.

"In April last, I inoculated three children of Mr. News, of Alstone, in this neighbourhood, with vaccine matter, which did not communicate the disease; and, as they were exposed to the infection of the small-pox, Mr. News wished to have them inoculated with that matter. At this period, the only matter I could procure, was from the extremities of a child who had passed the crisis of the disease two days, which I inserted into the arms of the three children. The two elder did not receive the infection; but the arm of the youngest, a girl fifteen months old, inflamed and suppurated. On one side of the inoculated part two small pustules appeared spontaneously, and the child was indisposed; so that the parents and friends concluded she would be safe from the disease in future. When the incision first inflamed, its appearance was very proper; but after the suppurative stage took place, I very much suspected it was not characteristic of the true disease;

and accordingly inoculated this child and the other with variolous matter. My suspicion was verified; for the disease was communicated to this child as well as the other two, and they all passed through its stages with perfect safety.

"With respect to another observation of Dr. Jenner, that the variolous inoculation is capable of bringing latent diseases into action; I have long been so fully persuaded that scrophulous affections have succeeded the small-pox, that I have invariably made this circumstance an argument in favour of the Cow-pox. Nor have I, so far as my experience goes, ever seen maladies of any kind excited by the Cow-pox.

"I am, &c.

"JOHN PHYTHIAN.

"Winchcombe, Gloucestershire,
Nov. 15, 1801."

Here is a case of spurious small-pox; occasioned by matter which had degenerated, but not lost all its original virtue. It was attended with a secondary eruption, and constitutional indisposition; either of which circumstances is generally considered, as a certain proof that the patient has the small-pox in a perfect manner; and is secure from all future infection. This case is similar to those of Mr. Trye, Mr. Earle, and Mr. Kite; already mentioned in the present work.

It is well known to all experienced practitioners, and others who have made inoculation a particular object of their enquiry, that *apparent* failures of variolous inoculation, as a security against the small-pox, have been extremely common; but we have reason to doubt, whether any *real* failure of that kind ever occurred. The same may be said of vaccine inoculation. It must, however, be admitted, that the abuse of a remedy is not an argument against its use; nor the fault of the practitioner, to be considered as an argument against the practice.

While I am upon this subject, I shall add a few other observations; which cannot be deemed superfluous, while men of enlightened understanding, extensive information, and splendid talents, imagine, that vaccine inoculation labours under any disadvantage, to which the inoculation of the small-pox is not liable.

If the small-pox has the advantage of an eruption, as a characteristic; it has the disadvantage of an eruption, as a disease. If an areola is sometimes wanting in the Cow-pox, an eruption is sometimes wanting in the small-pox.—In either case, the patient ought to be subjected to a second inoculation; which may be done with safety, both to himself and to others, in the Cow-pox; but not in the small-pox.

No other specific eruption is likely to be mistaken for the Cow-pox, in the human subject, by any per-

son well-acquainted with that disease; whereas, not only the chicken-pox, but every other pustulous eruption which flesh is heir to, is likely to be mistaken, and often has been mistaken, for the small-pox.

Add to this, the want of infection by effluvia in the Cow-pock, which enables us to transfer the virus from arm to arm, without danger of producing a worse disease, in case inoculation fails; and the safety with which we can practise this inoculation during every season of the year; and thus preserve the Vestal flame in a state of activity. These are advantages, of which the small-pox cannot boast.

Having alluded to an instance, where a pustule prematurely disappeared, in a child inoculated by the Rev. Mr. Jenner, at Oxford, I am happy in having it in my power to relate some farther particulars of that case.

Mr. Jenner left Oxford within a few days after the operation was performed. The care of the patient afterwards devolved on Dr. Williams, Regius Professor of Botany in that university; and a letter from this gentleman to Mr. Jenner, dated July 28th, 1801, gives the following account of the case.

"On the third day after inoculation, appearances of inflammation were visible; and we concluded that vaccination would succeed; but within seven or eight

days, the pustule almost wholly vanished. I consequently made a memorandum at the time, that a future inoculation would be necessary; but other avocations, and the loss of the virus, prevented me from carrying my purpose into execution, till unfortunately the small-pox appeared.

To the account already given, of the humane exertions of the clergy, to alleviate the miseries of mankind by the practice of vaccine inoculation, I shall add the following report; communicated to me by the Rev. Mr. Robinson, rector of Ampthill, in Bedfordshire, in a letter dated Jan. 3d, 1802.

Mr. Robinson had inoculated about sixty persons with Cow-pock matter; which he first took from the arm of his own child, about two months before.—He might have had many more patients, had he not declined inoculating, on account of the severity of the weather. This is a proof, that the prejudices of the public are not so great as it is pretended; notwithstanding those prejudices are strengthened by too many members of the community, who have an interest in the small-pox.

Mr. Robinson informs me, that he "felt great satisfaction in this little experience; having ascertained the mildness of the disorder; and that he is more than ever convinced, how much we are all indebted to Dr. Jenner for his discovery."

Mr. Fermor, whose early patronage of vaccine inoculation, active exertions in the great cause, and able vindication of the practice, I have already recorded; has given, and is continually giving, fresh proofs of his ardent zeal for the interests of humanity, and the public good.—The following article of intelligence was lately transmitted by him to Dr. Jenner.

"DEAR SIR,

"The following is the copy of a letter, sent to me the other day by the Rev. Mr. Reed, curate of Leckhamstead, in the county of Bucks; which will help to confirm the opinion the public have formed, on the great value of the Cow-pox.

"I remain very truly yours,

"*Tusmore*, "WM. FERMOR.
April 4, 1802."

"*To* WM. FERMOR, Esq. *Tusmore*.

"Seeing that a petition is before the House of Commons from Dr. Jenner, and wishing him every success which his most important discovery deserves, I have enclosed a certificate of the persons inoculated by me without a single adverse circumstance, having once before communicated to you some particulars, in a conversation at your house. I shall send the same list to Lord Buckingham, and the Duke of

Grafton; in whose immediate neighbourhood this experiment took place.

"I am, Sir, with great respect,

"Your obedient humble servant,

"J. T. A. Reed.

"*Leckhamstead, near Buckingham,*
March 21, 1802.

"List of persons inoculated in various parishes in the neighbourhood of Whittlebury Forest with the Cow-pox, from March 1800 to March 1802, by me, J. T. A. Reed, curate of Leckhamstead and Akeley.

Foxcote in Abthorpe	28
Whittlebury	86
Slapton	39
Syresham	68
Potterspury	55
Wicker	39
Akeley	68
Maids Morton	3
Wappenham	34
Silston	259
Paulerspury	314
Leckhamstead	98
Fawscott	7
Lillingston Dayrell	11
Green's Norton	28
Lillingston Lovell	39
Alderton	107
Abthorpe	189
Various places	106
	1578

" The preceding persons were inoculated by me gratis, in my own parishes, and in other parishes at the request of clergymen and other respectable persons; frequently under circumstances which exposed them to the greatest danger of the small-pox, both at the time of inoculation and since; without a single instance of any one receiving the small-pox, or suffering from the inoculated Cow-pox to such a degree, as to excite any well-founded alarm, or to require either medical or surgical assistance.

" J. T. A. Reed."

The Rev. Dr. Booker, of Dudley, in Staffordshire, affords another memorable example of a clergyman; who considers nothing inconsistent with the sacred function, that tends to promote the welfare and happiness of mankind.

In a letter to Dr. Jenner, he announces a sermon which he had preached, with a view to dispel the mist of prejudice and superstition; two of the grand obstacles, with which inoculation has to contend.—He then says, " The following additional case, to the many contained in your convincing publication, proving the beneficial effects of the Cow-pock, I beg leave to communicate.

" A woman now living in this neighbourhood, had the complaint while in service at a dairy-farm.—Several years afterwards she married; and lost her husband, who died of the small-pox,—a distemper she

never had. Yet, notwithstanding she was with him through all the stages of his fatal illness, handling his contagious body, and constantly inhaling the same pestiferous air, she did not experience the slightest symptom of the disease."

In a sermon on this subject, since published, Dr. Booker says: "A clergyman in Lancashire thus writes to the judicious discoverer. A few years ago, I was in the habit of burying two or three children almost every evening, during the spring and autumnal seasons, who had died of the small-pox; but now this disease has entirely ceased to send a single victim to the grave.—I have inoculated for the Cow-pox upwards of three thousand persons; and the small-pox has no longer an existence in my neighbourhood."

Dr. Booker then introduces into his discourse the remarkable case before-mentioned, with some important additions, in the following words.

"But, happily, we need not go beyond the limits of our own neighbourhood for a very signal fact, proving the sovereign and permanent efficacy of this antidote: a fact which, from scrupulous investigation and enquiry, I can authenticate.

"A woman, now residing in an adjacent village, far advanced in years, had, when young, the disease of which we are speaking; but never had the small-

pox.—More than twenty years afterwards, having married, her husband and five of her children were assailed by that dreadful distemper.

"Her husband died; and her children narrowly escaped a similar fate. Notwithstanding she was constantly with them, handling their contagious bodies, and inhaling their pestilential breath, she received not the slightest symptom of infection.

"Upwards of forty years after her having the Cow-pock, she nursed, and constantly attended upon, four of her grandchildren, during their illness of the casual small-pox; which proved mortal to all of them, as it had before done to her husband; yet, again, no symptom of the disease affected her. So that here we have a double proof, that the Cow-pock is not merely a temporary and transient security against the small-pox, thus remarkably fatal in one family; but that the security afforded by it is durable, as the means are simple."

Dr. Booker observes, it is a mark of pride and ignorance, to prefer means that are attended with labour and expense, to those which are simple and easy.—He says, the inoculation of the small-pox assuages the violence of the disease; but this sooths it into peace; or, to speak more properly, repels and counteracts its rage.

When enumerating the objections to the inocula-

tion of the small-pox, he says, "There are times when every neighbourhoood is free from the contagion of that disorder: yet some parent, anxious for the safety of his offspring, caused it to be introduced, by having them inoculated. We will suppose th t such parent's individual aim is accomplished; that his children happily recover, and are thus shielded from danger of future contagion. But what becomes of the children of his neighbours?—From his house, infection flies around: the children of his neighbours,—as dear to them as to his heart are his own,—from association or communication of some sort or other, take the *casual* small-pox, and are hurried by it to the grave! other children derive from the latter the virulent infection; and share a similar fate!—As when a small pebble is thrown into a tranquil lake, circles diverge rapidly wider and wider, till the whole surface becomes troubled,—an entire neighbourhood, or populous parish, may have melancholy cause to deplore, and severely to condemn the first introduction of such a disorder. Thus a single person, from a natural solicitude for the welfare of one particular child, may eventually occasion the deaths of thousands. 'A little leaven leaveneth the whole lump.' A single spark may lay a city in ashes."

This benevolent divine exhorts all parents to adopt the beneficial practice recommended by Dr. Jenner; thus avoiding the torments of self-reproach, which cannot fail to affect those, who, despising the salutary means which Providence has put in their power,

are doomed to see their children mutilated spectacles; or to shed tears of bitter remorse over their early graves.

Dr. Booker apologizes for his importunate appeal to the feelings of his audience, by reminding them of the number of victims whom they had seen cut off in early infancy, like the tender blossoms of spring; and committed to the dust. It was his lot, to witness their frequent interment; to peruse the melancholy catalogue; and to lament their untimely fate.

Hence he had, some years ago, publicly recommended the inoculation of the small-pox, as unquestionably palliative of that destructive disorder. In the present discourse he demonstrates, how preferable the salutary practice now recommended, is to the former.—He informs his parishioners, that what he advises them to do, he has already done himself; having had recourse to this pleasing remedy, for his own child.

He wishes them to be happy in the health and welfare of their children; and emphatically concludes in words to the following effect. If, by the blessing of Divine Providence, I should prove the humble means of preserving one of those little ones, that otherwise would have perished, I shall not have preached in vain.

In a note added to this discourse, Dr. Booker

describes the ravages of the small-pox at Tibet; "where the disorder is no less dreaded by the inhabitants than the plague. Indeed, where it rages, it is not less fatal. When it appears in any place, those who are not yet attacked by the disease, quit their habitations, and leave the miserable victims of that horrible distemper to perish."

This melancholy picture of a pest, which, some people suppose, is now disarmed of half its terrors by inoculation, is taken from Capt. Turner's Account of an Embassy to the Court of the Teshoo Lama. He informs us, that he saw many villages which had been thus deserted: and that the capital once remained three years without inhabitants; until it was supposed to be completely purged of the pestilential infection.

I was lately informed by Dr. Moore, a young physician, who had been in India, and applied to me for vaccine matter on his return to that country, that it is a common custom with the natives, to carry their children who are seized with the small-pox to the pagodas, and consign them to the care of the priests. The pangs that must rend a mother's heart, on this occasion, are more easily felt than described.

Dr. Booker says, "were not this benefactor of mankind a living character, I should ask, Where are the monuments erected to his honour."—To this question we may reply, Such a man wants no monu-

ment, but that which he has erected himself;—a monument, which the proudest conqueror, in the midst of all his triumphs purchased with blood, might envy.

Dr. Booker proposes, that the Small-pox Hospital should be called the Jennerian Hospital.—Should reason, justice, and gratitude, so far prevail, I hope that edifice will first be purified from the dire infection with which it has been so long contaminated; and be converted in nature as well as in name.

A publication has lately appeared on the subject of vaccine inoculation, by Dr. Thornton; entitled, Facts Decisive in favour of the Cow-pock.

Among other arguments adduced by Dr. Thornton, to shew the mischiefs that ensue from the ravages of the small-pox, I shall select the following.

" The late professor, J. George Busch, whose memory the city of Hamburgh is at this moment employed in honouring, tells of his having had the small-pox at nine years old, and, though they were attended with no imminent danger, they left him badly marked. ' I was afterwards informed,' says this philosopher, ' that previously to this affliction I had a comely appearance. For myself, I had never attended to the point. But one thing I know well. After this time, I perceived that those who visited

my parents, universally withheld from me that kindness of attention, which, with, a child is the first motive to render himself agreeable, though they shewed it to my well-looking brothers and sisters. All the pranks that I, poor pock-pitted boy, to whose feet no dancing-master had given the right position, or drawn the head from between the shoulders, played in my vivacity, might indeed have been performed with an ill grace.

" This too, I should observe was the period when the chief art of education consisted in hard words and blows. On me reproaches rained from all quarters. When my parent, who alone treated me with any degree of sense, carried me to Haarburg, my grandmother, and a brisk grand-aunt so *maltreated* poor George, that my father and mother were extremely unwilling I should repeat the visit. In my grandfather's favour I stood all the higher, for he was stock-blind; so could not judge of me by my exterior.'—From his subsequent history—particularly from the hypochondriacal complaint into which he afterwards fell; it should seem that this man, wise and useful as he proved, never entirely recovered of the wound inflicted on his tender mind. What then can be hoped where fewer resources exist, and fewer favourable circumstances occur in riper years?"

" There scarce needs a comment on the advantage of the *Cow-pox* over the *small-pox*.—The blessing of vision, so often destroyed by a *small-pox pustule* set-

tling on the eye, is but too obvious to be much insisted on. How feelingly MILTON deplores this loss!

——— Thus with the year
Seasons return; but *not to me returns*
Day, or the sweet approach of ev'n or morn,
Or sight of vernal bloom, or summer's rose,
Or flocks, or herds, or human face divine;
But clouds instead, and ever-during dark,
Surrounds me,—from the cheerful ways of men
Cut off,—and, for the book of knowledge fair,
Presented with an universal blank
Of nature's works, to me expung'd and raz'd,
And wisdom at one entrance quite shut out."

Dr. Thornton proves, by the high authorities of Baron Dimsdale and Dr. Heberden, that inoculation of the small-pox is more detrimental than beneficial to society; on account of its spreading the natural infection.

By Dr. Thornton's narrative of the commencement of the Suttonian method of inoculation, communicated to him by Mr. Sutton himself, it appears, that Mr. Sutton first practised it when he settled at Ingatestone, in the year 1763.

Having lately had the honour of introducing Mr. Sutton to Dr. Jenner, at his own request, and heard him acknowledge, that he had inoculated above forty persons with vaccine virus, I deem it a duty to record the circumstance; particularly as even Mr. Sutton had not been able to produce the small-pox on

those who had undergone vaccination. His acquiescence in the request of those parents, who preferred vaccine inoculation for their children, is an instance of great candour.

The following eloquent and pathetic passage, in Dr. Thornton's work, may perhaps make some impression on those, who are so unfeeling as to vindicate the inoculation of the small-pox at the present hour.

"The Cow-pox never kills, the natural and inoculated small-pox not unfrequently. If the whole merit of the cause of vaccine inoculation depended on this single point, it might rest secure as the greatest discovery ever made. The Cow-pox never destroys life!—Glorious tidings!—Happy annunciation!—I, who have lost by variolous inoculation my first-born child; a boy, who, not alone in his parent's eye, but to all who knew him, promised the fulfilment of every wish, have a just right to exult in the present fortunate discovery of Dr. Jenner. How his lovely form was defaced, and what his sufferings were, before death snatched him to an early tomb,—has been drawn by me with a trembling hand, when I wrote my section on the symptoms and ravages of the small-pox!—So faithful is the portrait, that I have often witnessed tears to flow in abundance, when this section has been read by others, as bringing to recollection many a similar distressing scene exhibited by some favourite child, or by some friend's or relation's

child.—My tears are now wiped away; and may theirs be also, by the pleasing view of the present ameliorated condition of humanity!"

Dr. Thornton asserts, that the Mary-le-bone Dispensary, to which he was at that time the physician, was the first public institution where vaccine inoculation was introduced. This is a mistake. The first public institution where that practice was introduced, was the Small-pox Hospital.

Dr. Thornton gives a history of vaccine inoculation in the county of Westmoreland; where, he informs us, previous to his arrival, the disease was equally unknown to the inhabitants in general, and to medical men.

When at Lowther, the seat of the late Earl of Lonsdale, in the autumn of the year 1800, he was requested by his Lordship to send to London for Cow-pock matter; in order to introduce the salutary practice of vaccine inoculation in that part of the kingdom. I therefore sent him a proper supply on lancets; which, on the 4th of October, was inserted with success.

Having inoculated above a thousand persons with vaccine virus, and repeatedly put several of them to the test of inoculation with small-pox matter, and exposure to the natural infection, he sent Cow-pock matter to several towns and villages in the

neighbourhood, in order to propagate the benign practice.

Dr. Thornton professes, that one principal motive, with him, for laying the result of his observations before the public, was, a wish to convince the rulers of a generous nation, how beneficial the practice is; and what an ample remuneration is due to Dr. Jenner.

I have now before me, a work of a different complexion. It is entitled, Facts, and some Arguments, tending to shew, that the public decision may with prudence be suspended, respecting Inoculation of the Cow-pox: by Thomas Lee, a member of the university of Edinburgh.

Mr. Lee dedicates his book to the Faculty of Medicine of the university of Edinburgh; and subscribes himself an unworthy, because truant, son of that university. The propriety of this appellation, no one who reads Mr. Lee's performance will be inclined to dispute. Never was a more striking instance exhibited, that

"A little learning is a dang'rous thing."

The book is a satyr;—a satyr that blows hot and cold with the same breath. It is a panegyric and a libel on the practice which Dr. Jenner has proposed.

In one respect, this truant son of the university seems not to have studied in vain. He is a com-

plete master of arts.—He has had the art to transform the murrain into the Cow-pox; and to represent an erysipelas of the human body, occasioned by wearing a garment made out of the fleece of a diseased animal, as the Cow-pox in the cow.

Virgil says,

Verum etiam invisos si quis tentarat amictus,
Ardentes papulæ, atque immundus olentia sudor,
Membra sequebatur: nec longo deinde moranti
Tempore, contactos artus sacer ignis edebat.

Dryden says,

——————But if the vest they wear,
Red blisters rising on their paps appear;
And flaming carbuncles, and noisome sweat,
And clammy dews, that loathsome lice beget;
Till the slow-creeping evil eats his way,
Consumes the parching limbs, and makes the life his prey.

This would not have suited Mr. Lee's purpose; he therefore artfully transforms the passage; and makes a greater burlesque of it than Dryden himself has done. He says,

——————*But if the skin be touch'd*,
Red blisters rising on the paps appear;
And flaming carbuncles, and noisome sweat,
And clammy dews, that loathsome lice beget;
Till the slow-creeping evil eats his way,
Consumes the parching limbs, and makes the life his prey.

The word papulæ signifies an eruption attending

the disease; which attacked those who wore garments made of the tainted fleece. Dryden, by a strange association of ideas, seems to have thought of the paps of the men from the similarity of sound in the words papulæ and paps.

" Loathsome lice beget," is added by Dryden, in order to eke out the verse, and make rhime with sweat: otherwise we should wonder, how he could travestie Virgil in such a vile manner, as he has done in this passage. Had Mr. Lee been content with reading the original, the very idea of *lice* could never have entered *his head*.

Mr. Lee's philippics are published at Bristol; where he seems to have received the mantle of the unfortunate man, who prejudiced the people of that city against vaccination long ago. I hope he can plead the same apology with that unfortunate man, the only apology which can be pleaded, for misrepresenting the nature of the Cow-pox, and say with his brother in Romeo and Juliet, " My poverty and not my will consented."

The cloven foot is shewn at the very beginning of his book, where he places the corrupt translation, perverted to serve his purpose.

To shew how ingeniously the sense of this passage is altered, I shall here add a translation of the same, together with the context; and flatter myself, that

the following lines cannot be charged with a want of fidelity, though they may have no other merit to boast.

> A lurking venom vitiated the skin,
> No toil could cleanse the sordid flesh within;
> Nor water wash the taint away, nor flame
> The stench abolish, or the savour tame.
> The putrid fleece could not be safely shorn,
> The web be woven, or the vest be worn.
> Who try'd that odious garment, was beset
> With burning blisters and offensive sweat:
> His tainted members caught the fatal flame,
> And sacred fire consum'd his vital frame.

Mr. Lee has introduced another quotation, signifying that the health of mankind is under the protection of Providence.—Instead of this, he tries to persuade the English reader, that the original signifies, Providence only is our protection against contagion; and our bulwark against violence.

If Mr. Lee is of opinion, that nothing is left to the agency of second causes, it is no wonder he became a truant to the university; but it is a wonder he pretends to practice physic. How unfortunate it is, that he was not examined before the committee of the House of Commons, on Dr. Smith's petition, in order to elucidate the contested point; to inform the committee, that the fumigation, for which they were about to vote five thousand pounds, was no security against contagion; and that it would all end in smoke.

Mr. Lee insinuates, that it is contrary to all analogy and fact, to suppose vaccine inoculation a security against the small-pox. Had he not turned truant, and deprived his alma mater of the advantage of his counsels, two of the most celebrated professors of the most celebrated medical university in the world might have profited by his talents, and preserved their offspring and their descendants from the delusion of Dr. Jenner.

How erroneous their judgment, how great their credulity has been, the following extract of a letter from my friend Dr. Tierney, now residing at Brighton, will demonstrate.—After observing, that vaccine inoculation is not much cultivated at Brighton, notwithstanding the small-pox has lately committed considerable devastations there, he informs me, that this want of attention to the practice has been one motive with him, for preparing some short account of its efficacy for the press.

He adds, "though I cannot add much information, not already before the public, I still feel it a duty I owe, and every medical man owes, to promote and encourage the more general introduction of that salutary practice.—This, I hope, will be accelerated, by the late determination of Parliament in favour of our friend Dr. Jenner; which, although the remuneration is unworthy of the people of this country, and of such a discovery, will be attended with the good effect of rendering it more popular.

" You wished to have a concise statement of the progress of vaccine inoculation in Edinburgh.—It is more than two years since, on giving Dr. Gregory, the professor of the practice of physic in that university, an account of the experience I had of the efficacy of the Cow-pox, he had the liberality to make the first experiment on one of his own children; whom I inoculated with vaccine virus.

" The operation was attended with the usual success; and another of Dr. Gregory's children has since been vaccinated.—A grandchild of Dr. Monro has been inoculated with matter taken from this infant. The practice of vaccine inoculation is now become general in Edinburgh; and, sanctioned by names of such high medical reputation, bids fair to extirpate the small-pox from that part of the kingdom.

Had the Jennerian discovery been made a few years earlier, that worthy man, Robert Newman, whose case is mentioned by Mr. Lee, might have had a very different sort of a Cow-pox, from that which he swears he had, when he was so young that he could not have been any judge of the matter; and the cook-maid at Bristol might have preserved her beauty, the loss of which Mr. Lee so pathetically deplores.

Mr. Lee says, these tales concerning the supposed failures of the Cow-pox are *round* and unvarnished.

His readers will probably think them *flat:* they are like tales that are twice told.

Mr. Lee admits, that the present question, *Whether millions shall be consigned to misery and death,—or that misery be averted, and life prolonged,*—is one of the most important that can engage the mind of man. I hope, therefore, when he writes again, he will write on a subject which he understands; and, following the excellent rule which he has laid down, not confound speculation with experience, nor assertions with facts.

This author allows, that if the donation to Dr. Jenner, of ten thousand pounds, is intended as a reward for a communication really possessing the magnitude and consequence he attaches to it, such a sum is poor and pitiful remuneration; given in a spirit of miserable and peddling parsimony. He asserts, that in old times such a benefactor of mankind would have been deified; and that if ever an error on the side of generosity could be justifiable in any cause, it is in such a cause as this.

Mr. Lee candidly admits, that if the seal of time should confirm the truth of Dr. Jenner's propositions, he would be justly entitled to the honours, emoluments, and unbounded gratitude of the nations of the world; on account of the importance, the immense importance of his discovery, to the present, and to future generations.

It is impossible to give a proper analysis of the Report of the Committee of the House of Commons on Dr. Jenner's discovery, within the limits of the present volume. I shall, however, embrace the earliest opportunity of abridging that important memoir, together with other documents too valuable to be consigned to oblivion.

It was allowed by the Chancellor of the Exchequer, that for a discovery such as that of Dr. Jenner, no pecuniary reward could be considered as a remuneration. After such a declaration, many people were surprised that this gentleman should object to the greater reward of twenty thousand pounds, which was proposed by several other distinguished members of the house; and was likely to be carried by a great majority. This was not the time for the practice of economy to commence.

But perhaps we ought not to feel any great degree of surprise at such a proceeding, when we reflect, that although Dr. Jenner's inestimable discovery has been promulgated above five years, and ratified by the sanction of Parliament, no bill has yet been brought into Parliament for promoting the practice; and the public are indebted, not to the philanthropy, not to the vigilance, or to the guardian care, of any pilot at the helm, but to the zealous exertions of private individuals, for all the advantages they have hitherto derived from vaccination.

To such exertions they are indebted for an institution, which is honoured with the patronage of their Majesties, and all the Royal Family; an institution which Dr. Jenner is to superintend; an institution which, I trust, will prove worthy of the Discoverer of Vaccine Inoculation, and of the Metropolis of the British Empire.

The Society has already established a Central House, where Dr. Walker is appointed Resident Inoculator; and several other stations, in order to accommodate the public. Having been requested by Dr. Walker to deliver to him the lancet, as a kind of installation, I embraced that opportunity of saying, that I trusted he would never lay it down, till he had exterminated the Small-pox.

The seventeenth of May, being the first anniversary of Dr. Jenner's birth-day, was celebrated by the Society with every demonstration of joy. The health of Jenner was drank; the panegyric of Jenner was pronounced; nor did the Muse withhold her tributary lay.

> Hæc tibi semper erunt, et quum sollemnia vota
> Reddemus Nymphis, et quum lustrabimus agros.
> Dum juga montis aper, fluvios dum piscis amabit,
> Dumque thymo pascentur apes, dum rore cicadæ,
> Semper honos nomenque tuum laudesque manebunt.

It is the intention of this society, to inoculate

gratis; to supply medical practitioners with matter and instructions gratis; and to promote the formation of similar societies in every part of the kingdom.

Having proposed that the society should solicit the Royal patronage, and bear the title of the Royal Jennerian Society for the Extermination of the Small-pox, I have reason to congratulate myself on the success of that measure. It is well known, that the King of Prussia, the first crowned head who submitted his children to vaccination, and the Emperor of Germany, who followed his example, have considerably promoted the practice; but the Empress Dowager of Russia has distinguished herself above all others in this great cause of humanity.

In October 1801, when the Court was at Moscow, on account of the coronation of the present Emperor, Mr. Lindstrohm, surgeon to his Imperial Majesty, successfully inoculated a child with vaccine matter received on a thread from Dr. Friese, of Breslaw.

The Empress Dowager, who zealously patronizes this beneficial practice, confered on the child the name of Vaccinoff, in addition to her orignal name; caused her to be conveyed in one of her own coaches to Petersburg, and to be placed in the Foundling Hospital, as a source of future inoculations; and settled on her a provision for life.

She has also sent a valuable diamond ring to Dr. Jenner, by the hands of Lord St. Helens; another to Dr. Friese; and a letter to Dr. Jenner, written by her own hand, of which the following is a translation.

" Sir,

" The practice of vaccine inoculation in England having been attended with the happiest success, which is well attested, I have eagerly imitated that example, by introducing it into the charitable establishments under my direction.

" My endeavours having perfectly answered my expectations, I feel a pleasure in reporting their success; and in testifying my acknowledgments to him, who has rendered such a signal service to humanity.

" This motive induces me to offer you, Sir, the ring sent herewith, as a testimony of the sentiments of esteem and regard with which I am,

" Yours affectionately,

" *Paulowsky, August* 10, 1802. " Mary."

By a letter from Dr. Friese I learn, that vaccine inoculation is now established throughout the Russian dominions. This is owing to the distinguished patronage and protection it has received:

Magnum reiginæ nomen obumbrat.

Vaccine virus which Mr. Harder, surgeon-major of Revel, received from me, proved successful; and it appears by a letter received from him by Dr. Jenner, that from this source the nobles who possess estates in the neighbourhood, had inoculated many thousands of peasants with their own hands.

At Constantinople, and in its environs, the new inoculation is practised by Doctors Hesse, Scot, and Pezzoni. The Turks, who had rejected the inoculation of the small-pox, submit their children to this mild process; and even predestination itself has begun to give way.

Upwards of 70,000 have been vaccinated in the Italian Republic, by Dr. Sacco and his fellow-labourers. This was in consequence of the effectual measures pursued. By order of Government, a proclamation had been read by the clergy from the pulpit, inviting the people to adopt this salutary process; and at Milan, vaccine inoculation was practised in every parish, and in every church.

Dr. Sacco, who till now was sceptical with regard to Dr. Jenner's opinion of the origin of the Cow-pock, is at length convinced that it is well founded. His own servant has contracted a disease from the heels of a horse; from which Dr. Sacco produced a vesicle in the cow, and in the human subject, exactly resembling the Cow-pock.

This intelligence was received by Dr. Jenner from Dr. De Carro; who also states, that another man at Milan had received infection from the grease. From this source likewise Dr. Sacco had commenced a new series of experiments.

Dr. Malfatti of Vienna, and several medical practitioners of Milan, Bologna, Pavia, and other parts of Italy, whom Dr. Sacco had assembled on the occasion, all concurred in opinion, that this was a full confirmation of the theory of Dr. Jenner.

Additional information, on this subject, may be derived from a letter of Dr. Sacco to Dr. Jenner, dated March 23, 1803. Dr. Sacco had long been making experiments with equine matter; but in vain, till the commencement of the present year. The perusal of Dr. Loy's publication then encouraged him to institute a new series; and the wetness of the season, in consequence of which a considerable number of horses were affected with the grease, favoured his attempt.

His own servant, after dressing one of his horses labouring under that disorder, had five pustules on the fore-arms; but Dr. Sacco was not informed of the circumstance, till they were in a state of exsiccation. He inoculated several cows and children with the matter, but to no purpose.

Nevertheless this case encouraged him to perse-

vere in his efforts; which were at length crowned with success. A coachman, who had an eruption on his hands from the same cause, was brought to the Foundling Hospital at Milan, where several children were inoculated from him. On the same day Dr. Sacco inoculated from him nine children and a cow. In three of the children, a pustule similar to the Cow-pock took place; but in the cow, the infection failed.

With matter taken from the children, Dr. Sacco had repeated his experiments; and reproduced pustules, exactly resembling those of the Cow-pock, to the fourth generation.—He has also submitted his patients to the test of inoculation for the small-pox, which they bore with impunity. Hence Dr. Sacco concludes, as many other intelligent persons have long done, that the grease is the origin of the Cow-pock, and that equine and vaccine virus are the same.

He has since inoculated six other children with the matter of grease, and excited two pustules, possessing all the characteristics of the Cow-pock. Hence he is of opinion, that equine matter is a perfect security against the small-pox, without passing through the medium of the cow. He intends to publish an account of this disease in the horse, with coloured plates. Such a work will be highly acceptable to the friends of vaccination. Nothing else is wanting, to render that system complete.

Dr. Jenner has also received the following intelligence from Dr. De Carro. By a letter from Dr. La Font, a French physician of great learning and ingenuity, practising at Salonica in Macedonia, dated June 3, it appears, that he had, since the preceding autumn, vaccinated 1132 persons. He first heard of Dr. Jenner's discovery from the Earl of Elgin and Dr. Scot, when travelling in Greece; who used their utmost efforts to propagate vaccination.

When the English Consul at Salonica went to Athens to meet Lord Elgin, he saw a great number of Athenians under vaccine inoculation. Matter which he gave Dr. La Font failed; but some which Dr. De Carro sent him on his ivory lancets succeeded. Dr. De Carro likewise sent him Dr. Loy's book; and requested him to make as many experiments as possible with equine matter.

Dr. La Font has reason to believe from report, that the Cow-pox prevails in Salonica.—As to the grease, he says, the farriers in that country are very well acquainted with it; and divide it into three distinct species, the phlegmonous, the scrofulous, and the variolous. With this last species, supposing it to be the same with that of Dr. Loy, Dr. La Font began his experiments.

He found a horse that had been attacked with

symptoms of fever; which ceased as soon as the eruption appeared. His fore-legs were much swollen. The left had four pustules; one on the heel; a second some inches higher, a third on the articulation, and a fourth near the breast. These pustules were like those of the small-pox; but there were none in any other part.

He took matter from the upper pustules, on the twelfth day. It was limpid; but rather yellow and filamentous. With this matter a cow was inoculated; but without success. He next inoculated a girl twelve years of age. This experiment also proved unsuccessful: but it is probable, she had had the small-pox.

He then inoculated two boys with the same matter; and in each of them excited a pustule resembling that produced by Cow-pock matter. The febrile symptoms in these patients were rather more violent than common; but in the subsequent inoculations, with the virus taken from these patients, this mild affection assumed its usual form.

I shall here insert some other evidence, in proof of the same position.

John Elstone, of Mifflin in Gloucestershire, caught the equine disease from the heels of a horse in the year 1777. In the year 1801 he was inoculated by Dr. Jenner in both arms, with active vaccine virus,

but to no purpose; although the operation succeeded in thirty other persons, who were inoculated at the same time. He was inoculated again, after the expiration of a fortnight; but in vain. No other reason can be assigned for his insusceptibility of the Cow-pock, but his having had the equine disease; since he had never milked a cow, nor had the small-pox.

A letter has been received by the President of the Royal Academy, from the Medical Delegation of the Department of Agogna, in the Italian Republic, stating, that Mr. Birago, a surgeon of Milan, had met with a similar case; which is probably that alluded to by Dr. Sacco. The Committee for Vaccine Inoculation have ascertained by experiments, that the matter of this vesicle produces an affection in the human subject, exactly resembling the Cow-pock.

The following case occurred in my own practice: —— Perry, No. 1, St. Ann's-court, Dean-street, Soho, was inoculated by me with Cow-pock matter, together with his child, and several other persons. He had two small spurious pustules, of a purple colour, which is no uncommon occurrence in those who are vaccinated after they have had the small-pox; while in all the rest, who were inoculated at the same time and with the same matter, the genuine Cow-pock took place.

He never had the small-pox, but had been twice

inoculated for that disorder to no purpose. Upon enquiry I learned, that while he milked cows, thirteen years before, he had a vesicle upon each hand, which has left a distinct cicatrix behind.

Whether he received this infection from the cow, or immediately from the horse, cannot be ascertained. He had no suspicion that this was the cause of his insusceptibility of the small-pox, till he received that information from me.

This happened at Anstey, near Buntingforth in Hertfordshire; which enables me to mention a fifteenth county, where the malady has been discovered.

I have before me a letter from Lord St. Asaph to Dr. Jenner, in which his Lordship expresses a doubt which he entertained, concerning the origin of the Cow-pox, when he read Dr. Jenner's publication; and observes, that this was the only point which he thought not sufficiently proved.

The noble Lord has since made some enquiries in the county of Suffolk, where he resides. The person to whom he applied was Mr. Harwood of Battisford Hall; who declared, *he positively disbelieved* the fact.

A few weeks after this conversation, he called on Lord St. Asaph; and informed him, that he had very unexpectedly obtained some information on the sub-

ject, concerning which his Lordship had before questioned him. Samuel Nunn and his wife, who had both been servants to Mr. Harwood, lately paid him a visit; and, in the course of conversation, Mrs. Nunn alluded to some event, which occurred at the time *when all the cows had sore udders; and when she herself suffered so much pain from a violent eruption on her hands and arms*, the marks of which were still visible.

On hearing this, Mr. Harwood, recollecting the questions put to him by Lord St. Asaph, asked the husband, if he remembered whether any horse in his stable had *at that time* greasy heels. The man replied, that he certainly did; and named a particular horse that was so diseased for a long while.

Mr. Harwood then enquired, whether he ever used to milk the cows.—The man's answer was, "Why, to be sure, Sir, that was not my business: but I was then courting my wife; and sometimes, when I had finished my work, I went to help her in her's."

The man himself was not infected; but, of twenty cows in the dairy, not a single one escaped. This is the only instance which Lord St. Asaph was able to discover, of cows in his neighbourhood having been thus affected.

The noble Lord concludes his letter in the following words.—"The facts were communicated to me

by an avowed disbeliever in the truth of your discovery; and obtained from those who had never heard of Dr. Jenner or vaccine inoculation; one of whom indeed had had the disease, without knowing it, or its name.

"I flatter myself, such ignorance will be, in a short time, no where to be found; and that, in this instance at least, we shall not "see nations slowly wise"—in availing themselves of the invaluable advantages of the discovery; nor "meanly just"—to the merits of the man who made it.

"I am, Sir,

"Your obliged and obedient servant,

"ST. ASAPH."

"*Berkeley-square, April* 25, 1803."

It appears by the foregoing observations, that the Cow-pox is a rare disease in Suffolk. I have, nevertheless noticed, in page 391, another part of that county in which it had been discovered. The case now recorded confirms the opinion, that grease is the proximate cause of the complaint; and that the charms of the dairy-maid are a predisposing cause. Let our farmers beware, how they suffer a dairy-maid who is young and handsome to milk their cows,—

Ne mala vicini pecoris contagia lædant.

By a letter dated Whitby, Dec. 26, 1802, Dr. Loy informs Dr. Jenner, that the subject of his sixth experiment, who was inoculated with the matter of

grease, has resisted the infection of the natural small-pox, although several times exposed. Several of those whom he had inoculated with vaccine virus, generated by inoculation with equine, have also been exposed more than once to the infection of the natural small-pox; but without effect.

Dr. Duncan expressed a doubt, whether these persons had not had the small-pox previous to inoculation; but Dr. Loy affirms, that this supposition is perfectly groundless; and that the majority of them had never been within several miles of the small-pox, till after inoculation.

That the variolous matter which he used was good, is evident from its having readily communicated the disease to others; and many gentlemen of respectability in the neighbourhood can testify, that the experiments were fairly performed. "One of them," says Dr. Loy, "at my request, saw me inoculate one of his cows from the greasy heel of his horse, with a lancet, with which he himself supplied me at the time of the experiment; and this experiment proved successful."

Dr. De Carro, in a letter dated, Vienna, Feb. 19, 1802, informs me, that the preservative power of the Cow-pox was noticed in a weekly paper called General Amusements, published at Gottingen in 1769. The author, whose name was not mentioned, speaking of the diseases said by Livy to be common to men

and cattle, observes, that the Cow-pox prevails in the neighbourhood of Gottingen, and infects the milkers; and that those who have had the Cow-pox flatter themselves they are perfectly secure against the infection of the small-pox. He also tells us, he had made many enquiries; and was well assured by very respectable persons, that this opinion of the milkers was well founded.

The foregoing is probably the second allusion to the Cow-pox on record. The first is noticed in the 167th page of this work.

By a letter dated Aug. 4, 1802, Dr. De Carro informs me, that the experiment of vaccinating sheep, which was made in Hungary on a very large scale, failed. Those animals appear to be scarcely susceptible of the disease. The experiment was made by Dr. Pessina, Professor of the Veterinary School; who afterwards inoculated two thousand sheep with the matter of the rot itself; and produced a vesicle resembling that from which the fluid was taken, but three or four times as large.

No general eruption took place, no sign of danger appeared, and a very small number of the animals had any constitutional indisposition; yet, although the rot prevailed throughout the flocks, and was raging on every side, none of them caught the disease.

Professor Pessina observes, that it is extremely

difficult to seize the moment, when the matter of the rot is fluid. It is soon inspissated, and changed into a crust.

When the learned Professor tried this experiment, he did not know that the same spesies of inoculation had already been practised in France; and still more at Geneva.

Dr. De Carro had sent vaccine matter to Rome, at the request of Cardinal Consalvi, Secretary of State to the Pope. This prelate wishes much to see vaccination introduced into the Roman territories; but a medical faction do all they can to prevent it.

By a letter from Dr. De Carro to Dr. Jenner, dated Jan. 22, 1803, we receive the pleasing intelligence, that the matter sent by Dr. De Carro to Bagdad succeeded under the direction of Dr. Short, an English physician, attached to Mr. Harford Jones, the British Resident at Bagdad; and at Bassora, under the direction of Mr. Milne, an English surgeon, attached to Mr. Manetty, the British Consul.

These four gentlemen had been extremely active, in sending matter to several other parts of Asia. In the Bombay Courier of July 8, 1802, Drs. Moir and Scott, published an account, that they had also been so fortunate as to excite the vaccine pustule in India, to the great joy of the inhabitants; and that the Government of the Presidency lent every possible

assistance. Measures were taken to diffuse the benefits of this important discovery throughout all the British settlements; and a hope was entertained, that it might be extended even to China.

Great pains are taken, to explain the nature of the process to the natives, who readily submit their children to this salutary operation.

The limits of this volume will not allow of my giving a detail of the progress of vaccination in India; yet I cannot withhold the following extract of a letter from Dr. Meir, of the Medical Board at Madras, dated Jan. 4, 1803.

"It will be a great satisfaction to you and Mrs. Montgomery to know, that your little girl has been inoculated for the Cow-pock; and has it in the most genuine characteristic manner. The pustule on each arm has a beautiful appearance; and she appears to feel no inconvenience.

"Every European child here has been inoculated for the Cow-pock; and had the affection in the mildest and most genuine form. They are all improved in their constitutions in consequence of that operation.

"The practice is now rapidly diffusing itself among the natives.—It may be considered as the gift of Heaven."

The following letter, which I lately received from Dr. Jenner, will in some measure account for the rapid progress which vaccine inoculation has made in India; by shewing, that the inhabitants of that remote part of the world were not altogether ignorant of its importance, or unprepared for its reception.

" *Hertford-street, June* 18, 1803.

" My dear Sir,

" The following intelligence, which has just been communicated to me by a gentleman, who quitted the province of Bengal about two years ago, I am certain you will receive with pleasure. You must well recollect the testimonial, to which, in the year 1803, you obtained the signatures of so many respectable medical gentlemen of the metropolis; and which was inserted in the periodical publications of the day.

" This testimonial found its way to Bengal; and thus an immediate stop was put to all controversy respecting the validity of the arguments in favour of vaccine inoculation; for the inhabitants, from that time, ardently sought for those means of inoculating their families, which they at length so happily possess.

" Accept my best thanks for your excellent plates of the vaccine vesicle. I shall not only consider them as pledges of your friendship; but as

monuments of your zeal and industry in a meritorious cause.

"I am

"Your's truly,

"EDWARD JENNER."

Dr. De Carro lately made an excursion into Moravia with Baron Braun, proprietor of one of the largest estates in the Austrian dominions; in order to examine the state of the flocks attacked with the rot. The mortality was considerable; but by a timely inoculation with matter of the same disease, the remaining part was preserved.

Dr. De Carro calls this process clavelisation, and also proposes the term claveliser, from clavelée, the French word for the rot.

He says, "I never saw such a dreadful disease as the rot: it really gave me an idea of the plague. When it is virulent, the sheep lose their eyes; their wool falls off, and their skin cracks in a zig-zag form. Their nostrils are so full of a fetid matter, that the shepherds are under the necessity of constantly syringing them with an infusion of elder-flowers, to prevent suffocation.

"The virulent species of rot never produces distinct pustules, from which matter can be taken for inoculation.—It can only be taken from the benign sort.—Every pustule leaves a pit; and the wool

never grows again. Hence I could tell what sheep had undergone the disease, as well as the oldest shepherds; though I never saw it but once in my life.

"The sick were separated from the sound, like regiments of cavalry in a camp; and those who were likely to recover, from those which were incurable. In short I saw plainly, that the cure, or rather the prevention of this disorder, is a most important object of rural economy."

Dr. De Carro tried vaccination on these animals, with the matter taken from a child whom he had brought from Vienna for that purpose; but in vain. He also tried it in sixteen children; in all of whom it succeeded. In the sheep it produced only small local sores.

Having perused some publications on the diseases of sheep, he learned, that many farmers ascribe the rot to contagion arising from an eruptive distemper of the horse.

Vaccination has been introduced into Salonica, by means of matter sent by Dr. De Carro; who has since received an account from Dr. La Font, a French physician, of his having vaccinated the son of the English Consul. This child has since had the plague in a mild manner, and recovered. Hence it has been asserted in some of our English journals, that the Cow-pock had proved a preventive of that

horrible distemper. This, however, is erroneous. Dr. De Carro has read, but he does not recollect where, that those who have had the small-pox are less susceptible of the plague.

By a letter in the Bibliothéque Britannique we learn, that Dr. Thompson of Naples has tried vaccination in dogs; but it proved ineffectual. By the same channel we are informed, that Brigadier Smith, an officer in the service of his Catholic Majesty, has propagated vaccination in Spain with the most ardent zeal; and that there is a general demand for matter from all parts of the kingdom.

Letters from Dr Waterhouse bring me the most satisfactory proofs of the progress which the Jennerian practice is making in America. A number of those who were vaccinated in New England, have been submitted to the test of variolous inoculation with impunity.

Dr. Seaman of New York, to whom Dr. Mitchell alluded in his letter inserted in this treatise, as the promoter of the Vaccine Institution at New York, is now in England. He communicates to me the grateful intelligence, that his fellow citizens now redouble their exertions in this great cause of humanity.

In a New York paper, called the American Citizen, several extracts from the first part of this treatise

are published by a person, who expresses a confidence, that every philanthropic editor of a public paper will aid his endeavours to disseminate this information. Politicians will smile, when he tells the citizens of the United States, that this subject is of infinitely greater importance to them, than all the revolutions that take place, all the battles that are fought, and all the blood that is shed, in Europe.

Dr. Seaman was the first, and for some time the only medical man, who practised vaccine inoculation in New York; and he has now given it stability in that part of the world by his zealous and indefatigable exertions.

In my analysis of Dr. Colon's work, I stated, on his authority, that Dr. Valentin, a celebrated physician of Nancy, had presented his own daughter, when under vaccination, to the medical society of that city. This is a mistake. Dr. Valentin presented to the society a girl whom he had vaccinated; but he has no daughter; unless we consider as his daughter, the lovely Vaccina whom he has so generously adopted.

This gentleman, who is now in England, requested me to present his work, entitled, "Results of the Inoculation of the Cow-pock," to the Royal Jennerian Society; and previously to peruse it. I regret, that the limits of this volume will not allow of my

entering into the merits of a treatise, written by a man, who first announced this happy discovery to his countrymen; and, after he had recommended the old inoculation in France, sacrificed his interest on the altar of humanity, and adopted the new.

In the course of this work, an opinion has repeatedly been urged, and abundantly confirmed by my own observations and those of others, that two morbid actions and two eruptive diseases, can co-exist. I shall now record some cases of a similar kind.

One occurs in Dr. Jenner's Farther Observations, p. 137; in which the Cow-pock and the measles co-existed; and each ran its regular course.—Another case occurs in Dr. Haygarth's work on the Extermination of the Small-pox, communicated by Dr. Clarke of Newcastle. It is one of a co-existence of the measles and the small-pox.

The same complication of disorders took place in the case of the Rev. Dr. Calder of Paddington; and in that of a child of Mr. Stott, No. 7, Tottenham-place, Tottenham-court-road. In both these instances, the measles appeared before the turn of the small-pox.

Dr. James Hamilton, physician to the London Dispensary, informs me, that he attended at the same time, in the same family, six persons labouring under a complication of the small-pox, the measles,

and the hooping-cough. This triple combination of diseases has already been noticed more than once in the present treatise.

One of those diseases, however, I trust, will soon begin to hide its diminished head. Hitherto, the means of extinguishing this horrid pestilence have been too much neglected.—It must excite the astonishment of posterity, that notwithstanding the glad tidings of vaccination were announced in the year 1798, fourteen hundred and sixty-one human beings were suffered to fall victims to the small-pox within the bills of mortality, in the year 1801; and fifteen hundred and seventy-nine in 1802.—To remain supine upon such an occasion, when the welfare and happiness of the present generation and of all posterity were at stake, was ten thousand times more cruel and more criminal, than to fiddle while Rome was in flames.

It is now incumbent on me, to give a concise account of my own practice, ere I close this volume. The number whom I have vaccinated, at this time (May 1803), amounts to upwards of two thousand. The more I see of the practice, the more I am confirmed in my opinion, that it may be relied on as a security against the small-pox.

It gives me great pleasure to find, that in Southwark, and the neighbouring villages, where I have endeavoured for more than three years to propagate

the new inoculation, and, as far as was in my power, to supply the want of a public institution among the numerous poor inhabiting those parts, by inoculating them at their own houses, the practice is become extremely popular. Of this I have abundant proofs: numbers, who have witnessed its good effects, come to me from those parts; and others repair with confidence to the stations which the Royal Jennerian Society has provided for that purpose.

One important inference which I draw from my own experience, is this, that the Cow-pock possesses a very considerable power of superseding the small-pox; insomuch, that out of fifty cases, at least, in which the patients had been exposed to previous infection, two thirds totally escaped; and the remaining part, in general, had the disease in a milder form, than that which is produced by inoculation with variolous matter.

This I have had ample opportunities of verifying; especially in the autumn of 1800, when the small-pox raged with uncommon violence; particularly in those parts which are inhabited by the poor, and the laborious classes of the community. Having endeavoured, upon every occasion, to vaccinate all those who were not already attacked by the disorder, I venture to assert, that inoculation with variolous matter, even when the patients have been exposed to the small-pox, is unnecessary; and that we have

not only a more safe, but a more effectual resource in our hands.

Having, in a former part of this work, given some account of the humane and public-spirited exertions of Wither Bramston, Esq. of Oakley-Hall, Hants, I am happy to add the following information, which I lately received from him, on the same subject.

In the year 1801, Mr. Bramston inoculated all those persons, whom he could prevail on to submit to the operation. Early in the year 1803, the small-pox broke out, in those who had not undergone vaccination; but Mr. Bramston again introduced the Jennerian practice; secured all those who were within the sphere of infection; and checked the ravages of that disease.

This inspired the people in the neighbourhood with confidence. On the former occasion he had inoculated seven hundred; he now, within the space of three months, added thirteen hundred to the number.

In the autumn of 1799, when I was at the house of my relation, Mr. Messiter, of Shaftesbury, I recommended vaccine inoculation for his children; but could not prevail, owing to the novelty of the practice at that time. They were afterwards inoculated in the old way; and the following letter will shew, with what event. The same communication

affords one of the most striking instances on record, of the protection against the small-pox, afforded by the Cow-pox. With this case, combining every proof that a rational man can wish, I shall conclude my evidence in favour of the new inoculation; and cannot present it to my readers in a better manner, than in Mr. Messiter's own words.

"*Shaftesbury, 26th May*, 1801.

"DEAR SIR,

"Understanding that you are about to publish a treatise on the vaccine inoculation, I transmit the following statement of facts; conceiving that the information furnishes a strong instance, in favour of that practice.

"In the spring of 1801, I had my two little boys, who were then in a healthy and proper state, inoculated by Mr. Pew, a surgeon of eminence in this town. At the same time, the female servant who had been accustomed to attend them, was also inoculated by the same gentleman, and with the same matter.

"The children had the disorder in great abundance; particularly the youngest, who fell a victim to it; but the servant, who slept the whole time with one of them, and was throughout the day with both, discovered not the least symptom of the disorder.

"She was inoculated twice afterwards, but still re-

sisted infection; and, on enquiry since, it turns out, that she some years ago had the Cow-pox, whilst employed in her father's dairy.

"It may not be improper to add, that Mrs. Messiter understood, that when about four years old, she had herself received the small-pox from inoculation; the surgeon who performed the operation having declared, that from the appearance of her arm, he was perfectly satisfied respecting it. To our very great surprise, however, she caught the infection from one of the children; but, I thank God, had the complaint in a more favourable way than could have been expected.

"I subjoin this circumstance, merely to shew, that if the servant had not previously received the Cow-pox, it is highly probable, she would not have escaped being infected, either by the three successive inoculations, or from the children, or her mistress.

"I am, &c.

"RICHARD MESSITER."

This valuable communication confirms three points, which have been insisted on in the course of this work;—first, that variolous inoculation has not "disarmed the small-pox of all its terrors;" secondly, that appearances, after inoculation of the small-pox, are sometimes fallacious; and thirdly, that the Cow-pox is a perfect and permanent security against the future infection of the small-pox.

No practice was ever attended with less danger; or promised to be productive of so much advantage. Enforced by such irresistible arguments, and fraught with such unspeakable benefits to mankind, though prejudice and misapprehension may for a while retard its progress,— it cannot fail to surmount all obstacles, and triumph over all opposition.

I cannot conclude, without congratulating my countrymen on this unparelleled improvement of the healing art; which will add another wreath to the genius of Britain, and immortalize the name of JENNER.

A TABLE,

SHEWING THE ADVANTAGES OF

VACCINE INOCULATION.

THE NATURAL SMALL-POX.	THE INOCULATED SMALL-POX.	THE INOCULATED COW-POCK.
I. The natural Small-pox is a loathsome, infectious, painful, and fatal disease. It is confined to no climate; but rages in every quarter of the world, and destroys a tenth part of mankind.	I. The inoculated Small-pox also is loathsome, infectious, painful, and sometimes fatal; and, when partially adopted, spreads the contagion, and increases the mortality of the disease.	I. The inoculated Cow-pock scarcely deserves the name of a disease. It is not infectious; and, in the opinion of the most experienced practitioners, has never proved fatal.
II. Those who survive the ravages of that dreadful distemper, often survive only to be the victims of other maladies; or to drag out a miserable existence worse than death.	II. It sometimes occasions the same maladies as the natural Small-pox.	II. It occasions no other disease. On the contrary, it has often been known to improve health; and to remedy those diseases under which the patient before laboured.
III. This cruel and lamentable disorder leaves behind it pits, scars, and other blemishes; and bodily deformities which embitter life.	III. It frequently leaves behind it the same blemishes and deformities as the natural Small-pox; which are the more deplorable as they were brought on by a voluntary act.	III. It leaves behind no blemish, but a *blessing*;—one of the greatest ever bestowed on man,—*a perfect security against the future infection of the Small-pox.*

1036

From this faithful statement of the advantages attending VACCINE INOCULATION, it must appear evident to every unprejudiced person, that it is the duty as well as the interest of every parent, of every individual, and of every nation, to adopt the practice; and to hasten

THE EXTERMINATION OF THE SMALL-POX.

A TABLE OF INSTRUCTIONS

FOR

VACCINE INOCULATION.

THE MODES OF INOCULATION.

THE Vaccine Fluid may be taken at any period, from the first appearance of the vesicle, till the areola begins to form, by small punctures; allowing it time to flow; or promoting the discharge by gentle pressure with the lancet.

It is to be inserted, by a superficial puncture, into the middle of the arm, between the shoulder and the elbow; or, when the arm is likely to be much used, into the inside of the leg.

It may be preserved, and conveyed, on the point of a Vaccinator; that is, a bit of ivory, shaped like the tooth of a comb, and pointed like a lancet. This may be wrapped in paper; or a number of them may be inclosed in a quill, to be stopped with white wax. When they are used, a puncture is to be made with a lancet, then the point of the Vaccinator is to be held in the puncture some time; and afterwards repeatedly wiped on the part.

THE LOCAL AND CONSTITUTIONAL SYMPTOMS.

ON the third day, the day of inoculation being reckoned the first, a red spot commonly appears; and on the fourth or fifth a vesicle of a light pink, sometimes with a bluish tint; gradually changing into a pearl colour. The margin is elevated, the centre depressed, the contents limpid. It increases till the tenth day.

About the ninth, the inflammation surrounding the base spreads rapidly, and forms a circumscribed areola; which, in a day or two, begins to fade. When this is fully formed, the vesicle declines. It turns brown in the centre; and is gradually converted into a hard smooth shining scab, of a dark mahogany colour, approaching to black; which falls off about the end of the third week, leaving a scar.

Sometimes the patient is drowsy as early as the second or third day. Febrile symptoms often appear, especially on the eighth; but they are generally slight and transient. In many cases there is no constitutional indisposition, in a few there is no areola; yet the patient is perfectly secure from the future infection of the small-pox, provided the progress of the vesicle has been regular and complete.

THE LOCAL AND GENERAL TREATMENT.

No preparation is necessary before the Cow-pock, no cathartic after; nor, in general, any medicine during the whole process. But if indisposition of any kind occurs, it may be treated in the same manner, as if the patient were not under vaccination.

Should inflammation become extensive, it may be checked by the frequent application of a compress dipped in cold water; or in a solution of Cerussa Acetata.

Should ulceration take place, a cool poultice may be advisable; to be continued till the sore is almost healed; when any mild adhesive plaster may be substituted. In slight cases, the plaster alone may be sufficient; but it seldom happens, that any application is necessary.

FINIS.

1037

INDEX.

A.

ABEL, Dr. his communication 404
Aberdeen, practice there 814
Abernethy, Mr. his letter 196
Adams, Dr. on Morbid Poisons 44
Adams, Mr. his letter 868
Addington, Mr. on Pustulous Eruptions 748
——— on Vaccine Inoculation 565
Address from Essex and Herts to Dr. Jenner 761
——— from Plymouth to ditto 687
Advantages of Vaccine Inoculation, 253, 285, 673, 984, 992, 1030
Advice to Parents 431
Agogna, practice there 1016
Aikin, Mr. on the Cow-pox 222, 330
Altona, practice there 705
America, practice there, 443, 594, 595, 754, 872, 886, 958, 964, 966, 1027
American Testimonials 966
Amsterdam, practice there 703
Analysis of Cow-pock Matter 790
Anderson, Mr. his practice 394, 590
Annals of Medicine 586
André, Mr. his letter 93
——— his practice 87
Anstey, Cow-pox there 1016
Areola wanting 288, 854, 927, 1037
Arm, treatment of 1037
Army, Vaccination of 544

Page
Asia, practice there 1022
Asthma, cured by Vaccination 752
Athens, practice there 1014
Aubert, Dr. his Report 491, 532

B.

Bacon quoted 10
Bagdad, practice there 1022
Ballhorn, Dr his practice 223, 763
——— his Treatise 763
Banks, Sir Joseph, his letter 492
Bannier, Cit. his experiments 939
Barcelona, practice there 797
Barrett, Mr. his practice 86
Barry, Dr. on the Cow-pox 28, 191, 348, 548
Bassorah, practice there 1022
Bastard Small-pox 834, 835
Beddoes, Dr. on Mr. Jacobs's case 48
Belgium, casual Cow-pox there 849
Bengal, practice there 1024
Berington, Rev. Mr. Joseph, his letter 971
——— his practice 553, 554
Berkeley, Earl of, his letter 807
Berlin, practice there 404, 546, 595
Berry, Mr. cases of his servants 621
Best, Dr. his Dissertation 914
Bethune Charost, his Funeral Oration 442
Bevan, Mr. his letter 692
Bills of Mortality 360, 376, 605, 1030
Birago, Mr. his practice 1015
Bird, Mr. his communication 178
Bird, Mrs. her letter 614
Birmingham, practice there 819
Birmingham Testimonial 476
Blackaller, Mr. his letter 271
Blair, Mr. his communications 83, 597
——— on the Cow-pox 227, 250
——— on improvements 188

Page

Bliss, Mr. his letter 746
Blood not infectious 217
Bohemia, practice there 904
Bolter, Mrs. her case 742
Bombay, practice there 1022
Bonaparte, Lucien, patronises Vaccination 923
Bond, his Treatise 943, 975
Booker, Rev. Dr. his letter 989
——————— his sermon 990
Boulogne, practice there 924
Boswell, Mr. his testimony 574
Bouttatz, Dr. his communication 749
Blount, Mr. his practice 818
Bradford Testimonial 489
Bradley, Dr. on the Cow-pox 181
Bramston, Wither, Esq. his practice 520, 1032
Brandreth, Dr. his practice 616
Branson, Mr. his letter 513
Brighton, practice there 86, 1004
Brussels, practice there 843
Brutes, whether susceptible of human contagion, 11, 22, 939, 940
Bruton, practice there 613
Buckland, practie there 974
Burbage, practice there 680
Busch, his case 995

C.

Cadaval, Duchess of, patronizes Vaccine Inoculation 893
Calcraft, Mr. his servant's case 693
Calder, Rev. Dr. his case 1029
Cambridge, N. E. practice there 443, 754, 886
Cappe, Dr. on Vaccination 356, 359, 485, 616
Careno, Dr. his practice 794
——————— his Treatise 385
Carpenters, Messrs. their communication 172

Page
Casual Cow-pox, 3, 5, 13, 29, 31, 39, 40, 45, 50, 54, 130, 167
201, 202, 241, 252, 282, 291, 348, 484, 538, 621, 622, 625
650, 693, 742, 745, 766, 809, 849, 877, 878, 989, 1034
Cautions respecting Vaccine Inoculation 420, 652, 697
Chauvot, M. his Dissertation..... 928
Chester, Mr. his communication 747
Chester Testimonial 476
Chicken-pox 45, 293, 828, 854, 944, 946, 979
Chobham cases 491
Clapham cases 470
Clavelisation 1025
Clement, Mr. his practice 772
Clergy, their exertions in favour of Vaccine Inoculation 196
242, 433, 499, 553, 554, 607, 615, 812, 986, 987
Clinch, Rev. Mr. his letter 616
Cline, Mr. his testimony..... 65, 297, 872
Clutterbuck, Mr. his letter..... 819
Coexistence of eruptive diseases 682, 1029
Coexistence of the Cow-pock and Chicken-pox, 109, 287, 524
875, 942, 944
Coexistence of the Cow-pock and Measles..... 108, 249, 744
Coexistence of the Cow-pock and Scarlatina 160, 656
Coexistence of the Cow-pock and Small-pox, 19, 25, 66, 71, 78
84, 94, 126, 189, 193, 235, 263, 268, 428, 482, 514, 525
534, 626, 686, 692, 869, 883
Coexistence of the Small-pox and Chicken-pox..... 943
Coexistence of the Small-pox and Measles, 73, 107, 108, 262
267, 268, 606, 1029
Coexistence of the Small-pox, Measles, and Hooping-
Cough 107, 267, 1029
Cold aggravates ulceration 195, 456
Coleman, Mr. false report concerning 813
Colladon, Dr. his letters 839
Colon, Dr. his Essay, &c. 433, 460
——— his History, &c. 922
Comparative Statement 334
Conscious View 324, 460

Page

Constantinople, practice there 443, 546, 905, 910, 1011
Cooke, Mr. his letter 261
Cooper, Mr. A. P. his communication 949
Cough cured by Vaccination 752, 856
Counties in which the Cow-pox has been discovered, 391, 406 703, 1017
Cow-pock matter not to be taken from a person who has had the Small-pox 697
Cow-pox after the Small-pox 120, 135, 136, 514, 611, 618 684, 695, 705, 862
——— always an inoculated disease 122
——— infectious without abrasion of the cuticle 179, 385
——— in the Cow 5, 119, 441, 624, 766, 936
——— in the eyelids and nostrils of a Cow 936
——— its antiquity 167, 348, 488, 1020
——— not infectious by effluvia, 70, 77, 78, 80, 154, 201 251, 253, 335, 1037
Creaser, Mr. on Vaccine Inoculation 526
Coxe, Dr. his communications 958, 961
Crocker, Mr. his case 622
Croft, Dr. his letter 176
Custance, Mr. his practice 347

D.

Dale, Mr. of Liverpool, his practice 616, 696
Darke, Mr. his letter 64
Darwin, Dr. on contagions 22
Davids, Dr. his practice 675
Deacon, his case 623
Deafness cured by Vaccination 855
De Carro, Dr. his letters 499, 512, 575, 1012, 1025
——— his practice 225, 575
Deep incisions condemned 222, 450, 886
Deham De Weridan, Madamoiselle, her practice 925
De La Roque, Count, his letter 799

Page
Denman, Dr. his letters 235, 258
Dennett, Mr. his letter 869
Derby, Earl of, his letter 257
Devonshire Place, case there 948
Domeier, Dr. his practice and Treatise 892
Dod, Dr. P. his Pamphlet 260
Dogs, Inoculation of 544, 913, 939, 1027
Downham, practice there 621
Dresden, practice there 404
Drewe, Rev. Mr. his communication 166
Drury-Lane, case there 416
Dundas, Mr. his letters 272, 273
Dunning, Mr. his letters 245, 509, 528
——— his Observations on Vaccine Inoculation 285
Durham Testimonial 476

E.

Earl, Mr. his case of Spurious Small-pox 57
Egremont, Earl of, patronizes Vaccination 87, 90, 616
Elgin, Earl of, patronizes Vaccination 443, 547, 905, 1014
Elstone, his case 1015
Emperor of Germany patronizes Vaccination 749, 838, 1009
Empress Dowager of Russia patronizes Vaccination 1009
Equine Matter, infection from 13, 15, 32, 63, 625, 1011, 1012
——— a preventive of the Small-pox 918, 936, 1013
Eruptions cured by Vaccination 580, 736, 907, 927
Erroneous method of calculation 816
Erving, Mr. his communication 950, 955
Esquimaux, mortality of the Small-pox among them 692
Eutin, Cow-pox discovered there 905
Evans, Mr. his practice 194
Exeter 'Change, cases there 608

F.

False Reports, 36, 82, 203, 205, 270, 272, 293, 414, 416, 420
470, 545, 596, 600, 608, 610, 662, 813, 815, 945, 949

Page

Fallacious appearances after Vaccine Inoculation, 257, 258, 1034
———————— after Variolous Inoculation 175
Fatty Tumour..... 494
Fawsett, Mr. his letter..... 815
Fermor, Mr. his communication 987
———— his letters 32, 500
———— his Reflections, &c. 234
Ferryman, Rev. Mr. his letter..... 90
———— ———— his practice 607, 615
Fewster, Mr. his communication 178
Fielding, Rev. Mr. his practice..... 553
Finch, Rev. Mr. his practice..... 242, 990
Florence, practice there..... 797
Foetus, not secured from the Small-pox 665
Fomentations injurious 981
Ford, Mr. his communications 946, 947
Fosbrooke, Rev. Mr. his letters 89, 193
Fournier, M. his Essay..... 843
Fowke, Mr. his cases 523
Fowler, Dr. his communication 179
Fraise, Mrs. her case 329
France, practice there, 273, 435, 460, 696, 698, 750, 775, 788
793, 823, 827, 846, 923
Franks, Mr. his letter..... 475
Frankfort, practice there 595
Friese, Dr. promotes Vaccination..... 1009
Fry, Mr. his letter 64

G.

Gale, Rev. Mr. his letter..... 497
Gardener, Mr. on Vaccine Inoculation..... 540
Garnett, Dr. his communication..... 514
———— his practice 694
Garsed, Mr. his letters 855, 871
Geary's children, their cases..... 414
Geneva, practice there 408, 421, 442

Page
Gerard, Dr. his practice 616
Germany, practice there (see Vienna and Hanover)..... 1009
Gibson, Mr. promotes Vaccination 478
Giffard, Mr. his communication 172
Glasgow, practice there 694
Gloucester, practice there 439
Gooch, Mr. and Mrs. their practice 754
Gooty 293
Gotha, practice there 409
Gottingen, Cow-pox discovered there 1021
——— practice there..... 885
Gratuitous Inoculation recommended.... 263, 455, 509, 627, 871
Grease, Dr. Jenner's opinion of..... 13
——— different species of (see *Equine Matter*, and *Origin of the Cow-pox*)..... 921, 1014
Greece, practice there 1014, 1026
Gregory, Dr. quoted 555
Griffiths, Mr. his communication 625
Grose, Mr. his letters 237, 691

H.

Hague, Vaccination recommended there by Government 796
Haighton, Dr. his experiment 200
Halifax, mortality of the inoculated Small-pox there 961
Hamburgh, practice there 705
Hamilton, Dr. James, his communication 1029
Hanover, Cow-pox discovered there..... 765, 885, 906, 1021
——— practice there 223, 543, 763
Harder, Mr. his practice 1011
Harrison, Dr. his case..... 492
Harvey's discovery..... 710
Haydon, his case..... 623
Haygarth, Dr. his plan 362, 364
Headache cured by Vaccination..... 752
Heberden on the Chicken-pox 828
Heim, Dr. his practice 546

Page
Henderson, Mr. his case..... 597
Herpetic eruption cured by Vaccination..... 736, 907
——— occasioned by a plaister..... 67
Herz, Dr. opposes Vaccination..... 889, 909
Hesse, Dr. his practice..... 1011
Hesse Cassell, practice there 459
Higgins, Mr. his communication 601
High Wycomb cases 662
Hill, Mr. his letter 508
Hobson, Mr. his case 496
Holland, practice there..... 675, 703, 796
Holstein, Cow-pox discovered there 30, 405, 783, 885
——— practice there..... 409
Holt, Rev. Mr. his practice 196
Home, Mr. his opinion of Adipose Tumours 495
Hooper, Dr. his letter..... 45, 191
Hornpock 584
Horsford, Mr. his case..... 463
Howard, Mr. his communication 177
Hufeland, Dr. on Vaccine Inoculation 543
——— on Variolous Inoculation 383
Huggan, Dr. his letters 203, 318
Hughes, Mr. his communication 180
Hull Testimonial 476
Hulme, Dr. his communications..... 694, 703
Hungary, practice there..... 904
Hunter, Mr. his experiments 22, 264
——— his opinions 22, 110, 264
Hunter, Dr. quoted 388
Hunter, Dr. of York, on Vaccination..... 364
Husson, Dr. his Researches..... 750, 893
Hutchins, Mrs. her case 624
Hutchinson, Mr. his letter 579

J.

Jamaica, practice there..... 618, 701, 746, 747

Page
Jeaffreson, Mr. his communication 682
Jefferson, President, his letter 759
——————— patronises Vaccination..... 885, 958
Jenner, Dr. his discoveries..... 4, 30, 34, 37, 516, 674, 896, 915
——————— his Inquiry 1, 5, 12, 32
——————— his Further Observations 1, 27, 37, 53
——————— his Continuation of Facts..... 1, 65
——————— his answer to Mr. Dunning 253
——————— his experiment with equine matter..... 63
——————— his first experiment with Vaccine matter..... 34
——————— his letters..... 78, 167, 221, 253, 864, 1024
——————— his memoir 707
——————— his Golden Rule 863
Jenner, Mr. Henry, his Address 46
——————————— his observations..... 248
——————————— his practice 606
Jenner, Rev. Mr. his practice 249, 606, 679, 985
Jennerian Institution at Malta 567
Jennerian Institution in London proposed..... 674, 995
Impetigo..... 947
Imprudent insertion of variolous matter 222, 449, 866
Infection without abrasion of the cuticle..... 179
India, practice there 1022
Indians instructed in Vaccination..... 965
Inflammation no proof of infection..... 174, 258
——————— treatment of 1037
Ingenhousz, Dr. his case 38
Inoculation by blister 885, 900
——————— by puncture 77, 361, 863, 903
——————— of brutes..... 22, 544, 913
——————— of cows 23, 119, 431, 441, 920, 921, 1020
——————— of dogs 544, 913, 940, 1027
——————— of oxen 938
——————— of sheep 384, 1021, 1025
Inoculation of the Chicken-pox 946
——————— of the Small-pox censured, 52, 208, 253, 276, 308
360, 362, 866, 871, 906, 997, 998, 1031, 1034

Page

Inoculation in Great Britain before it was introduced by Lady M. W. Montague..... 31
Inoculation with mixed matter 119, 193
Instructions for Vaccine Inoculation 1037
Jones, Arthur, Esq. his letters..... 559, 601
Jones, Mr. his communication 738
Jordan, Mr. his practice 122, 300, 306, 641
Irwin, Dr. his case 123
Italy, practice there 619, 934, 1016
Itch no impediment to Vaccination..... 771
—— not communicable with the Cow-pock 883
Juncker, Dr. on the Small-pox..... 307

K.

Keate, Mr. his practice..... 86
Kelson, Mr. his letter..... 114
Kent, Mr. his letter 560
Kidderminster, practice there..... 347
Kielmannsegge, Count, his communication..... 763
King of Prussia patronizes Vaccination 1009
Kingscote, Mrs. her practice..... 738
Kite, Mr. his cases 56

L.

Labradore, Small-pox there 604
La Font, Dr. his practice 1014
Late pustules..... 244, 388
Lawrence, Mr. his communication 713
Lee, Mr. his " Facts" 1000
Leeds Testimonial 476
Leese, Mr. his letter 314
—— Mr. Edward, his cases..... 108
Leipsic, practice there 404
Lentin, Dr. his commmunication..... 545
Letters of the Author in the Medical Journal..... 70, 505, 978
———————— in the Medical Review, 228, 248, 299, 308

Page
Lettsom, Dr. his observations on the Cow-pock 858
Lewis, Mr. his communication 735
Lindstrohm, Mr. his practice..... 1009
Little, Mr. his case 109
Liverpool, practice there 616
Local Cow-pock 492
Local Small-pox, 213, 221, 222, 329, 496, 538, 539, 696, 775, 854
Lombardy, practice there 783, 936
London Testimonial 297, 714, 1024
Lowther, practice there 999
Loy, Dr. his experiments 918, 1019
Lubbock, Dr. his letter 484
Lymph more active than pus 295, 383
Lyons, practice there 799

M.

Macedonia, practice there 1014
Mac Donald, Dr. his Observations 386
———— his practice 705
Maddock, Mr. his letter 515
Madras, practice there 1023
Malden, Mr. his letter 619
Maldon cases 610, 662
Malim, Mr. his case 306, 313, 319
Malta, practice there 565, 595, 679
Manchester Address 804
———— practice there 193, 262, 477
Marshall, Dr. his letters 148, 151, 255, 468, 547, 565, 567, 570 677, 679, 748, 776, 809
Masters, Mr. his letter 811
Maynoir, Dr. his practice 790
Measles, a second time 681, 683
Mecklenburg, Cow-pox discovered there 405, 885
Medal voted to Dr. Jenner 549, 687
Medical and Chirurgical Review 544
Meir, Dr. his letter 1023

Page
Melville, Dr. his practice 593
Memoir of the Committee of Vaccine Inoculation at Paris 696
Messiter, Mr. his communication 1032
Milan; practice there 934, 1001, 1013, 1016
Milne, Mr. his practice 1022
Minorca, practice there 468, 547
Mitchell, Dr. his letter 968
Mode of inoculation 423, 538, 697, 843, 1037
—— of preserving matter 1037
—— of taking matter 371, 423, 1037
Moniteur, extracts from 550, 698, 700
Monro, on Inoculation 376, 379
Monthly Magazine, extract from 595
Montrose, practice there 317, 774
Moravia, practice there 576, 886
Morbid actions may coexist 73, 106, 249, 264, 290, 1029
Moreau, Dr. his Treatise 777
Mortality of the small-pox 1036
—— in Asia 376
—— Edinburgh 379
—— France 700
—— Geneva 376
—— Great Britain 973
—— Hanover 768
—— the Hague 376
—— Kamschatka 779
—— Labradore 604
—— London 360, 376, 1030
—— Liverpool 362
—— Palermo 749
—— Peru 360
—— Russia 676
—— Tibet 994
—— York 362
Moscow, practice there 1009
Moseley, Dr. on the Cow-pox 74
Mowatt, Captain, case of his child 614

Page
Mottet, Count, his case 899

N.

Nancy, practice there 924
Naples, practice there 809
Navy, practice there..... 544, 688
Negroes, vaccination of 791
Nelson, Dr. his communication 417
Newby, Mr. his practice 640
Newfoundland, practice there 617
New York, practice there 969, 1027
———— Vaccine Institution there 969
Nichollas, Mr. his communication 262
Niedt, Dr. his Dissertation 943, 975
Nissen, Dr. his communication 783
Nomenclature for Vaccination 695
Nowell, Dr. his practice 924

O.

Obstacles to Inoculation 845
Odier, Dr. his Memoir 408
———— his practice..... 788, 923
———— on the Cow-pox 375
———— on the Small-pox 376
Origin of the Cow-pox, 5, 13, 26, 31, 62, 293, 342, 348, 382 693, 713, 918, 1011
Origin of the Small-pox 541
——— of Vaccine Inoculation 707
Osiander, Dr. his Treatise 885
———— his plates..... 906
Oxen susceptible of the Small-pox..... 938
Oxford cases 813, 815, 949, 985

P.

Paris, practice there, 273, 435, 460, 550, 595, 696, 698, 750 775, 777, 788, 793, 823, 827, 846, 853, 880, 923
Parliamentary Remuneration..... 8, 306, 1000, 1004, 1006, 1019

Page
Paterson, Dr. his practice 774
Paytherus, Mr. his communication 832
———— his Comparative Statement 334
Pears, Mr. his communications 705, 747
Pearson, Dr. his Inquiry..... 22, 43, 116
———— his letters..... 84, 92, 242
Peck, Mr. his testimony 174
Pegge, Sir C. on the origin of the Cow-pox..... 32, 342
Percival, Dr. promotes Vaccine Inoculation 477
Perry, Mr. his case..... 1016
Pessina, Dr. his practice..... 1021
Petersburg, practice there 1009
Petworth, practice there..... 87, 90, 616
Pezzoni, Dr. his practice 1011
Philadelphia, practice there 958, 964
Piault, M. his Oration 442
Piedmont, practice there 619
Piguellem, Dr. his practice 797
Plague not prevented by Vaccination 1026
Plymouth, practice there..... 203, 285, 509, 528
———— Testimonial..... 510
Pole, Admiral, promotes Vaccine Inoculation..... 618
Pole, Mr. his case 574
Portugal, practice there..... 880, 892
Powell, Dr. his case 599
Practice of the Author, 626, 664, 739, 810, 825, 873, 980, 1030
Prejudices against Vaccine Inoculation..... 11, 82
Premature pustules 147, 370, 668
Preservation of matter 61, 521, 522, 523, 575, 1037
Previous infection of the Small-pox, 98, 101, 114, 158, 289
303, 311, 313, 319, 464, 597, 626, 640, 646, 653, 661
664, 667, 668, 670, 671, 672, 692, 741, 826, 850, 869
873, 888, 902, 941, 1031
Primrose, Dr. his attack on Harvey 712
Prussia, practice there 404, 546, 595, 1009
Pulteney, Dr. his communication..... 168

Page
Purple pustules 1016
Purton, Mr. his communication 680, 683
Pustulous eruptions, 66, 78, 84, 89, 94, 125, 134, 139, 142
148, 189, 193, 229, 239, 254, 300, 308, 331, 335, 341, 368
426, 454, 456, 479, 491, 523, 533, 636, 637, 691, 756, 769
888, 900, 906
Putney, practice there..... 619
Putrid variolous matter 56, 473, 550, 595

R.

Rankin, Mr. his letters 15, 501, 614
Ranque, Dr. his Treatise..... 753
Recueil Periodique 433, 750, 827, 836
Redfearn, Dr. his communication 177
Reed, Rev. Mr. his practice 987
Reigate, practice there..... 601
Reims, practice there..... 438, 441
Reports of the Committees of Vaccine Inoculation at
Paris 435, 550, 696, 750, 789, 827, 846, 853, 880
Restraints on Inoculation 362, 448, 865
———————— proposed..... 308, 401
Retrograde motion of the absorbents denied 220
Revel, practice there 1011
Reumont, Dr. his communication..... 404
Richmond, practice there 272
Ring, Mr. John, his case 135, 514
———— his communications 566, 615, 704, 749
Robins, Mrs. her communication..... 621
Robinson, Mr. his cases..... 394
Robinson, Rev. Mr. his practice 986
Rollo, Dr. his letter 123
——— his practice 810
Rolph, Mr. his communication 178
Rome, practice there..... 797
Rooke, Mr. his practice..... 618, 701, 746
Rot, Inoculation of 384, 1021, 1025

Page
Rotterdam, practice there 675
Rouger, Dr. his Treatise 928
Rowlands, Mr. his letter 307
Royal Jennerian Society established 1008
Rush, Dr. his letter 963
——— Mr. his communication 163
Russell, Dr. his cases 108
Russia, practice there 1009

S.

Sacco, Dr. his letter 1012
———— his practice 619, 783, 1011
———— his Treatise 930
St. Asaph, Lord, his letter 1017
St. Thomas's Hospital, practice there 872
Salis, Rev. Dr. De, his communication 169
Salm, Count F. H. his communication 886
———————— patronizes Vaccine Inoculation 576
Salonica, practice there 1014, 1026
Saltzburg Journal 384
Sandys, Mr. his case 267
Saxe Meinungen, Cow-pox discovered there 885
Saxony, practice there 404
Scot, Dr. propagates Vaccination 1011, 1014
Scotland, practice there 394, 590
Scrofula cured by Vaccination 254, 752, 799, 856, 927
Scrofula not infectious 792
Segro, Dr. his letter 824
Serjeant, Mr. his communication 475
Seaman, Dr. his practice 1027
Sharpe, William, Esq. his letter 500
Shinach 28, 354, 485
Short, Dr. his practice 1022
Shorter, Mr. his letter 221
Shrewsbury, practice there 770
Sicily, practice there 677, 679, 748, 776
Simmons, Mr. his letter 501

Page
Simpson, Mr. his communications 83, 736
Sims, Dr. John, his letters 48, 189
Slater, Mr. his cases 662
Small-pox a second time 56, 57, 58, 681, 684, 860, 949
Small-pox in brutes 939
Small-pox mitigated by the Cow-pock, 127, 158, 263, 270, 312, 464, 513, 568, 640, 692, 883, 902, 941, 943
———— superseded by the Cow-pock, 101, 127, 158, 311, 314, 655, 672, 742, 1031
Smith, Rev. Mr. his communication 171
Somerville, Lord, cases of his coachman's children 414
Sore arms from cold 195, 456
———— treatment of 1037
Southwark, practice there 628, 1030
Spain, practice there 797, 923, 1027
Spurious Cow-pock, 39, 40, 43, 45, 47, 53, 56, 62, 238, 413 423, 644, 694, 816, 853, 899, 907, 917, 960, 973, 975
Spurious pustules, 56, 62, 147, 257, 413, 414, 415, 423, 483 611, 619
Spurious pustule not a proof that infection has failed, 147, 370 668, 941
Spurious [illegible]pox, 56, 57, 60, 175, 558, 830, 834, 854, 942 943, 973, 975, 981
Steel, Mr. his letter 602
Stevenson, Mr. his letter 820
Stewart, Mr. his practice 203
Stokes, Dr. his communication 481
Stott, Mr. his practice 694
Stromeyer, Mr. his practice 223
———— his Treatise 763
Sturminster, practice there 614, 872
Susceptibility of Vaccine Infection diminishes gradually 643
Sutton, Mr. his practice 997
———— his testimony 997
Suttonian Inoculation of the Small-pox 997
Sweden, practice there 784

Page
Switzerland, Cow-pox discovered there 937
———— practice there 790

T.

Table of Instructions 1037
Table shewing the Advantages of Vaccine Inoculation 1036
Tanner, Mr. his experiments 26, 249, 305, 336
———— his opinion of the Grease 501
Tarbes, M. his practice 924
Taylor, Mr. of Kent-street, his child's case 263
———— of Little Castle-street, his child's case 943
Testimonials of physicians and surgeons 716
———— of Lord Keith and Lord Hutchinson 798
Thompson, Dr. his practice 1027
———— Mr. his practice 135, 514
Thornton, Dr. his Facts Decisive 995
Thurkle, Mrs. her case 622
Tierney, Dr. his testimony 157
———— his letter 1004
Tissot, his fatal mistake 854
Toulouse, practice there 925
Tours, practice there 925
Townsend's Elements 219
Tracey, Dr. his cases 107
Treatment of the Cow-pock 1037
Trotter, Dr. his letters 206, 487, 689
———— his Medicina Nautica 207
Turton, Dr. of Swansea, on the Cow-pox 17
Trye, Mr. his cases 60, 552
———— his letter 1004

U.

Ulcers cured by Vaccine Inoculation 685
Underwood, Dr. his Inquiry 418

V.

Vaccination of a new-born infant 655

Page

Vaccination of a man 72 years of age 657
———— of a woman 84 years of age 657
———— of servants in a dairy recommended..... 179
Vaccine Inoculation communicates no other disease 883
Vaccine Institution at Edinburgh 589
———— in London 587, 1008
———— at Malta 567
———— Naples 809
———— New York 969, 1027
———— Paris 788
———— Petersburg 1009
Vaccine Matter preserved above six Months 900
Vaccine Vesicle, description of 288, 371, 424, 748, 1037
———— suspended by sulphur..... 659
Valentine, Dr. his practice 924, 926, 1028
Variolous Matter injured by heat 56, 60, 975
Vaume, Dr. on Vaccine Inoculation 374, 836
Venice, practice there 577, 796
Versailles, practice there..... 879
Vienna, practice there 225, 385, 404 512, 895
Vivian, Rev. Mr. his practice..... 812
Voisin, M. his Memoir 879

W.

Waitz, Dr. his practice..... 459
Wakefield, practice there 694
Wales, Mr. his communication..... 179
———— his practice 621
Walker, Dr. his appointment 1009
———— his letter..... 790
———— his practice 671
Wall, Dr. his communication 174
———— his letters 950, 956
Ward, Mr. his practice 193
Washbourn, Mr. his communication..... 234
Waterhouse, Dr. his letters, 754, 757, 886, 950, 958, 959, 964, 965, 1021

Page

Waterhouse, Dr. his Treatise 443
Wathen, Mr. experiments made at his request 639
Watt, Mr. his communication 684
Westmoreland, practice there 999
Whateley, Mr. his communication 611
White, Mr. of Bath, his letter 529
——— of Manchester, promotes Vaccine Inoculation 478
Whyte, Dr. his letter 546
Willan, Dr. his opinion 946
——— on the Measles 682
——— his Reports 582, 867
Williams, Dr. his letter 985
——— Mr. his case 693
Wilson, Dr. his letter 317
——— his practice 592
Wincanton, practice there 613
Windus, Mrs. her case 494
Winterbottom, Dr. his communication 776
Woburn, practice there 607, 615
Woodville, Dr. his opinion of the case at the Small-pox Hospital 780
——— his practice, 68, 72, 79, 94, 109, 117, 122, 189 299, 308, 479, 491, 533
——— his Reports 94, 300

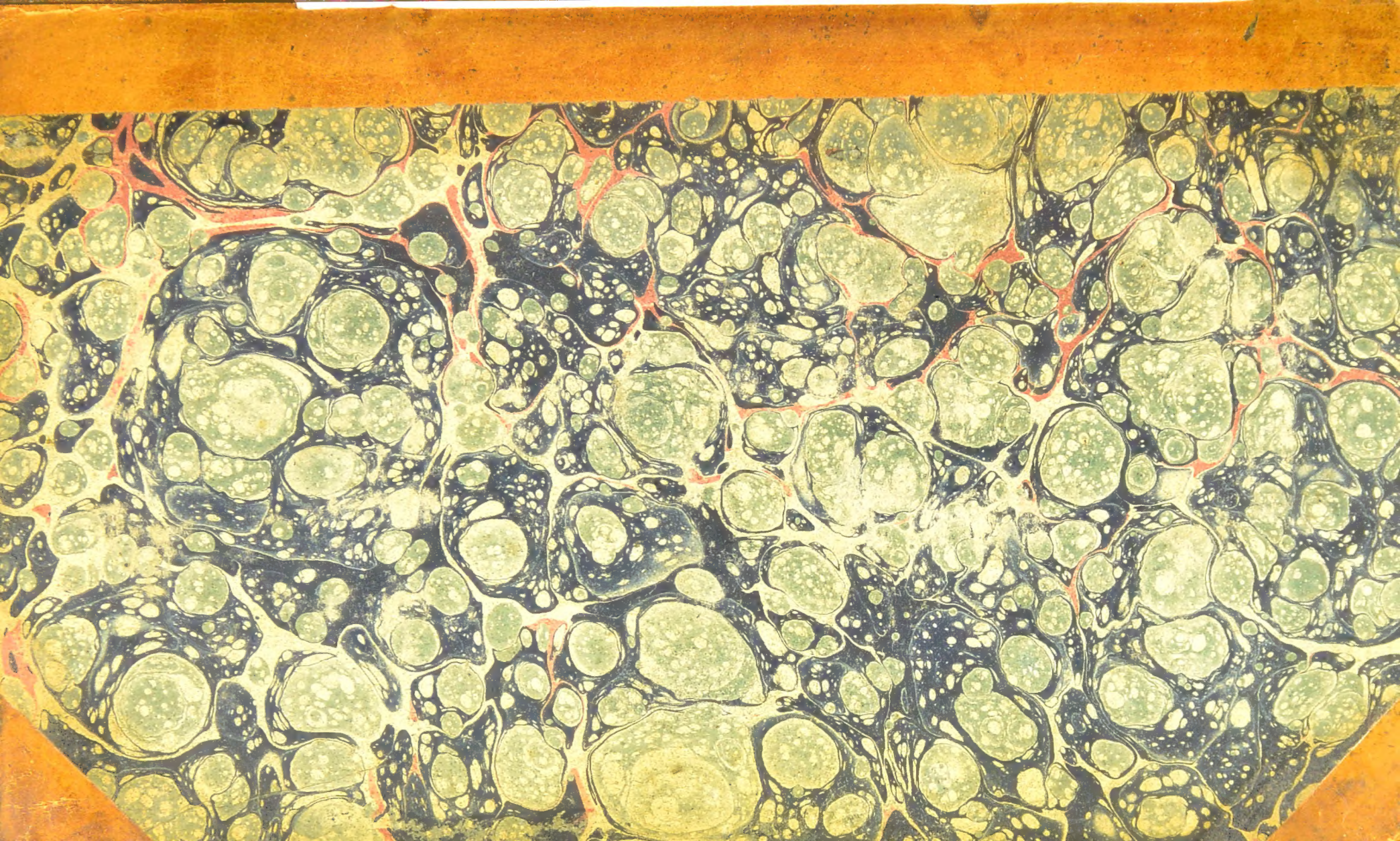
Y.

Yelloly, Dr. his communication 599
York, practice there 356, 485, 616
—— Testimonial 476

ERRATA.

Page 27, l. 6, for Turner, *r.* Tanner; p. 62, line 11, for events, *read* consequences; p. 106, l. 18, for exist, *r.* coexist; p. 137, l. 7. for that, *r.* his own; p. 139, l. 9, for Mr. Ketley, *r.* Mr. Evans, of Ketley; p. 162, l. 1, for considering, *r.* concerning; p. 163, l. 17, for innumerous, *r.* numerous; p. 164, l. 6, for representations, *r.* misrepresentations; p. 206, l. 9, for important, *r.* important department; p. 213, l. 6, for scarcity, *r.* security; p. 214. l. 5, for casually, *r.* usually; p. 221, l. 1, for as, *r.* as well as; p. 253, l. 21, for has, *r.* who has; p. 316, l. 24, for extinguish, *r.* extinguish or mitigate; p. 353, l. 1, for small-pox, *r.* Cow-pox; p. 381, l. 25, for importence, *r.* impotence; p. 409, l. 4, for the small-pox, *r.* the Cow-pox over the small-pox; p. 412, l. 11, for at all times, *r.* at times; p. 414, l. 10, for not premature, but full, *r.* not only premature, but also full; p. 441, l. 25, for transaction, *r.* transmission; p. 452, last line but 3, for Dr. Waterhouse, *r.* Dr. W.*; p. 548, l. 13, for aritique, *r.* critique; p. 573, l. 12, for Mermer, *r.* Marmorice; p. 619, l. 11, for Sacchi, *r.* Sacco; p. 642, last line, for patient, *r.* patients; p 783, l. 16, for Sacchi, *r.* Sacco; p. 973, l. 11, dele the comma after eruptions, and place it after Cow-pox.

* The initial is all that appears of this physician's name in Dr. Waterhouse's publication, and all that was copied into the manuscript for the present work. The compositor, disliking abbreviations, and not considering the context, altered it to Waterhouse; but it evidently alludes to a physician in England; and the only one who could at that time have formed such an opinion on the subject, as is there expressed.



COPYRIGHT ON

TITLE PAGE